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OCCLUSION OF LARGE SURGICAL ARTERIES WITH REMOVABLE METALLIC BANDS TO TEST THE EFFICIENCY OF THE COLLATERAL CIRCULATION

EXPERIMENTAL AND CLINICAL OBSERVATIONS *

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AND

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NEW ORLEANS

The chief object of this inquiry has been to determine whether the large arteries can be occluded long enough to make it possible to observe the effect of the arrested circulation in the territory supplied by the occluded vessel, without irreparably damaging the artery during the period of observation. How long can an artery be occluded so as to arrest all flow of blood through its lumen without permanently obliterating it? What is the utmost limit of time that compression with a removable metallic band can be maintained before permanent damage, leading to thrombosis, occurs in the intima? What are the changes that occur in the vessel after occlusion has been maintained for a certain number of hours, or days, at the time of the constriction and after constriction has been removed?

The importance of testing the efficiency of the collateral circulation before permanently obstructing or obliterating an important surgical tract in regions where permanent occlusion of the main regional trunk may be followed by disastrous consequences (such as the carotid, subclavian, innominate, iliac, aorta, etc.), was the chief incentive to this investigation. Hence the term "prophylactic" or "test" occlusion of arteries, may be given appropriately to this procedure.

The steadily widening field of the surgical treatment of malignant disease and the growing importance of testing the efficiency of the collateral circulation in the treatment of aneurysm and other vascular lesions, has led one of us (Dr. Matas) for several years to experiment clinically with methods that would afford the much-needed information in determining the efficiency of the collateral circulation. In connection with this subject the work of W. S. Halsted, Stratton of Oakland, Cal., Crile, Jordan of Heidelberg, Doberauer, Saiger and Riess, but especially of Halsted, with his characteristically thorough and ingenious experiments in the partial and progressive occlusion of the arteries, with rolled metallic bands, are most stimulating and suggestive. In addition to our prime object, which was to devise a satisfactory means of testing the efficiency of the collateral circulation, we have been especially concerned with the kind of material best suited for the compression of the arteries, combining the features of tissue tolerance, facility of application, ease of removal, with a minimum of trauma to the artery. To this end a series of experiments on dogs was undertaken in the laboratory of operative surgery of the Tulane University. In the first series, 1908 and 1909, 168 experiments were performed on forty-two dogs, but of these only forty-three experiments were available, on account of infections, deaths and escape of animals. These forty-three experiments, involving the carotid and femoral arteries, may be grouped as follows: In seven the artery was occluded one day; in seven the artery was occluded two days; in fourteen, three days; in eight, four days; in four, five days; in three, six days. In twenty-two of these cases the vessel and clamp were excised together at the expiration of the stated period of observation; in twenty-one, the clamp alone was removed, the vessel remaining *in situ*, to be taken out subsequently. After the removal of the vessels, the gross changes presented by the artery were noted and photographs made showing the site of the occlusion. A series of sixteen additional experiments were undertaken (Dr. Allen), Nov. 21, 1909, to May 6, 1910, for purposes of histologic study. The carotid and femoral arteries of dogs, as in the previous series, were utilized for the work. Ten cases in which the band and vessel were removed together were as follows: One, twelve hours; one, thirty-six hours; three, forty-eight hours; three, seventy-two hours; one, 120 hours; one, 144 hours. Six in which the clamp was removed after the number of hours stated and the clamped section of the vessel was removed four to ten days later, were as follows: Two, twenty-four hours; one, forty-eight hours; three, seventy-two hours. The results obtained in the above sixteen cases confirm the conclusions reached in the first report, as previously announced by one of us (Dr. Matas) in a preliminary report submitted to the Society of Clinical Surgery, Rochester, Minn., November, 1909. In all, including the first and second series, fifty-nine available experiments were utilized in this research. A separate inquiry into the application of complete and partial occlusion to the thoracic and abdominal aorta by various methods, not described in this report, is now being carried out and will form the basis of a separate report when the investigation is completed.

Three forms of bands were used, all about as wide as one diameter of the vessel operated on; first, fine silver wire strands soldered together so as to constitute a flat surface of the thickness of the single wire; second, thin aluminum bands held around the vessel by clamping their free ends with soft lead clips; third, aluminum

* Read in the Section on Surgery of the American Medical Association at the Sixty-first Annual Session, at St. Louis, June, 1910.

bands, stout enough to maintain the desired degree of compression by simply pressing and molding them to the vessel. The silver bands which had been used on the human subjects (Dr. M.) before the experimental work began were soon discarded for the aluminum bands (No. 20, Brown & Sharp's sheet-metal gauge), which retained their hold on the artery without the aid of the lead clips.

These bands are cut long enough to be used as aneurysm needles, bent and curved in the shape of a flat hook, which can be readily insinuated between the blood-vessel and its sheath; after the band has been carried around the circumference of the vessel, it is gently compressed by the fingers of the operator until the pulse on the distal side becomes imperceptible; the excess of band which remains is cut off with stout scissors, or preferably small wire clippers.

In placing the bands around the small arteries of the dog in attempting complete occlusion, it is very easy to crush them and set up traumatic changes not directly due to the use of the band. To avoid this, one end of the band is doubled on itself, arranged somewhat like a clothespin and the vessel slipped down between the opposing surfaces of the band, until the pulse can no longer be felt. The excess of band is then cut away; in this way danger of crushing by excessive force is reduced to a minimum.

Fig. 1.

Fig. 1.—Femoral, clamped twenty-four hours. Small collateral given off above point of compression. Removed ten days later. All illustrations 1 to 12 represent a magnification of 3½ times. The small transverse markings seen in some at points away from the clamps were produced by slight shrinking of vessel.

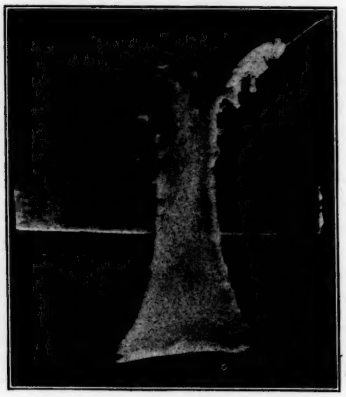

Fig. 2.

Fig. 2.—Carotid, clamped forty-eight hours; absolutely uninjured.

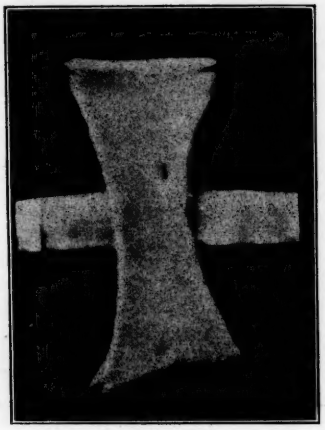

Fig. 3.

Fig. 3.—Femoral clamp removed after forty-eight hours, and vessel removed ten days later. Small pits seen are openings of collaterals.

Each band should be prepared for use by paring the sharp angles of the free end that is to be carried around the artery with scissors, the sharp edges should also be softened with a file; this is what Professor Halsted has aptly described as "manicuring a band."

If it should become necessary to remove the band at any time, on account of ischemic disturbances in the territory supplied by the occluded vessel (e. g., when cerebral disturbances occur after occlusion of the common carotid), the point of a sharp instrument inserted between the approximated ends of the band and slightly twisted accomplishes the separation and releases the vessel, allowing the circulation to be restored.

The bands have now been applied in the human subject fourteen times, seven times by Dr. Matas: (1) to the right common carotid and right subclavian, (third division), for innomino-aortic aneurysm; (2) to right common carotid and right subclavian for innominocarotid aneurysm; (3) as a preliminary to extirpation of a tumor of the upper carotid region, followed in three days by simultaneous extirpation of the tumor with the common carotid, including its bifurcation; (4) to right common carotid, as a preliminary to extirpation of tumor of lower jaw and submaxillary region; (5) to left common carotid as a preliminary to extirpation of pharyngeal, palatine and tonsillar neoplasm; (3) to right common carotid and right subclavian for innomino-aortic aneurism; (7) by Drs. Matas and Allen: to the internal and external carotids, just above the bifurcation, for innomino-aortic carotid aneurysm; (8) by Drs. Gessner and Matas, to the right common carotid at point of election for aneurysm involving carotid bifurcation; (9) by Dr. Allen, as a preliminary to extirpation of parotid tumor; (10) by Dr. I. Cohn, to the right common carotid and right subclavian for innomino-aortic aneurysm; (11) by Dr. Cohn, to left common carotid, as a preliminary to extirpation of carcinoma of neck, jaw and cheek; (12) by Dr. Gessner, to right common carotid, as a preliminary to extirpation of carcinoma of root of tongue; (13) by Dr. Matas, on the common carotid to control bleeding and starve a carcinoma of right parotid region. In all these cases the bands were applied as "test occlusions," but, as in no instance did cerebral or other disturbances in the peripheral circulation develop, the bands were allowed to remain undisturbed and in this way permanently occluded the vessels to which they were applied.

The only case (No. 14) in which the prophylactic value of this method of occluding the arteries was demonstrated, was a case of pulsating exophthalmos, in which ligation of the right carotid had been done twenty years previously.

The case was reported by Dr. Charles H. Mayo at the recent meeting of the American Surgical Association, Washington, May 3-5, 1910. The patient, a woman over 60 years of age, had suffered from a relapse of all the exophthalmic symptoms, complicated with general cirsoid enlargement of the vessels of the cranium and face.

The patient came to him after the common carotid on one side had been ligated for arteriovenous aneurysm [presumably traumatic rupture of internal carotid in the cavernous sinus. R. M.].

In this operation an attempt was made to ligate the dilated vessels around the orbit, resulting in the loss of an eye. When the patient came to Dr. Mayo there was an enormous protrusion of the left eye and pulsating veins on that side of the head. He determined to occlude the common carotid by the method we have described, and proceeded to do so under cocain anesthesia, using a little clip of block tin about three-quarters of an inch long and the width of the artery. When he was almost through with the operation, the patient remarked that she could not see anything; "the light was

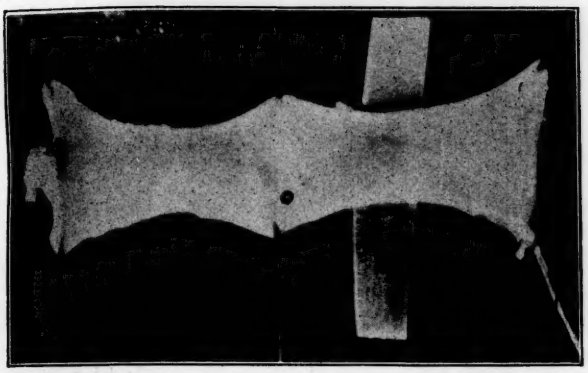

Fig. 4.—Carotid, clamped seventy-two hours; absolutely uninjured.

going out."[1] He immediately began to loosen the clip until the vision returned. This was done six months ago, and last week (end of April, 1910) the clip was still on her common carotid and her vision was better than before the operation.[1]

This was a brilliant and convincing demonstration of the superiority of the band over the ligature.

If a ligature had been applied, irremediable damage to the artery would have followed.

Fig. 6.—Carotid, clamped ninety-six hours. Intima adherent and vessel walls slightly corrugated at that point.

In all our cases the perfect tolerance by the tissues of the band, when properly applied, was demonstrated; without exception the bands remained permanently encysted in a fibrous sheath, without causing the slightest irritation.

1. See report of the proceedings of the American Surgical Association, May 3-5, 1910, Washington, D. C., Ann. Surg., July, 1910, p. 130.

As a result of this experimental inquiry, the following conclusions were arrived at:

1. It is possible to compress a vessel to the point of obliterating the pulse and maintain this pressure for from three to four days before obliterative endarteritis occurs.

2. All the vessels clamped in this manner stand compression seventy-two hours without recognizable gross visible changes; some begin to show decided changes in ninety-six hours.

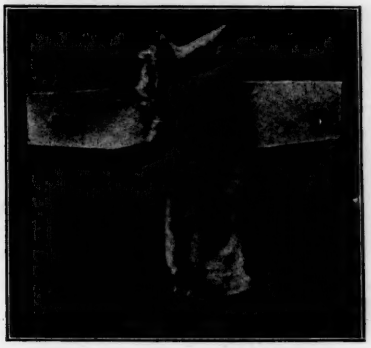

Fig. 5.—Femoral, clamped seventy-two hours; removed ten days later. Note collaterals.

In a report of the examination of the fifteen specimens of dogs' arteries (femoral and carotid) made by Dr. Frazer B. Gurd, demonstrator in the Laboratory of Surgical Pathology at Tulane, he concludes:

Unless trauma be sufficiently marked to crush the tissues throughout the entire thickness of the vessel walls, no changes will be noted, either in the endothelial lining or in the inner layers of the muscular coat in the vessels which have been clamped for seventy-two hours or less. In vessels which have been subjected to clamping for four days or more, there does not appear to be the same tendency to return to normal

Fig. 7.—Femoral, clamped 120 hours; removed thirteen days later. Obliteration; staining from adherent thrombus.

conditions. The lumen remaining obliterated, but little evidence of degenerative change is seen and thrombus formation is, apparently, not prone to take place.

Finally, there is seemingly no reason why in ligating the great vessels at the root of the neck and at the limbs, in continuity, these removable bands should not be substituted for the circular ligature, which permanently damages the artery, even when carefully applied. The

ligature cannot be released when fatal ischemia threatens in the peripheral parts, as in the brain, without almost absolute certainty of thrombus formation or embolism starting at the seat of the ligation. The advantages of this simple method of arterial occlusion which interrupts the circulation without damaging the arteries permanently, can be readily appreciated by all those who realize the practical importance of first testing the efficiency of the collateral circulation.

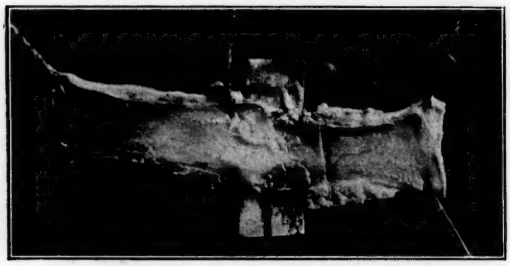

Fig. 8.—Carotid, clamped 144 hours. Vessel removed eighteen days afterward. Complete obliteration with adherent thrombus.

REPORT OF THE HISTOLOGIC EXAMINATION OF THE ARTERIES CLAMPED WITH METALLIC BANDS, BY DR. F. B. GURD

The specimens supplied by Drs Matas and Allen for histologic examination consisted of small portions of dogs' arteries, carotid and femoral, but chiefly carotid. Altogether fifteen such specimens were examined. The tissues were fixed in Zenker's solution, and in 10 per cent. dilution of liquor formaldehydi, in order to have better material for the determination of elastic tissue changes. They were imbedded in paraffin and sections stained by hematoxylin-eosin, Mallory's connective tissue stain, phosphotungstic-acid-hematein and Weigert's elastic tissue stains.

Since the changes in practically all the vessels are similar, a detailed description will be made of only those which show more important variations. The specimens, in general, fall into two groups, the first of which, containing twelve arteries, is composed of sections from vessels removed immediately after taking off the clamps after these had been in position for periods varying from twelve to 144 hours. The second group consisted of three specimens in which following

Fig. 10.—Early model of band made of silver strands held in place with clip (obsolete).

the application of the clamps during periods of twenty-four, forty-eight and seventy-two hours, respectively, the vessels were left, *in situ*, for seven days in order that late changes might be studied.

As a general statement it may be said that no intimal or endothelial changes appear in any of the sections from vessels which had been clamped for seventy-two hours or less, with the exception of two which will be described in detail. In practically all specimens there is a more or less marked change in the adventitia and in the outer portion of the muscular coat. These changes consist, in the less marked cases, of a swelling of the collagenous fibrils together with an edema present in the adventitia and between the muscle bundles in the outer muscular layer (Fig. 15). In the other vessels about the situation of the clamp there is an infiltration with lymphoid and plasma cells, together with a slight increase in the number of vessels in the adventitia. In two instances the adventitia and the surrounding tissues are the site of an acute inflammatory process as evidenced by the presence of polymorphonuclear leukocytes and fibrin, evidently the result of infection.

It is noteworthy that, in the three vessels in which the clamps had been removed seven days prior to removal of

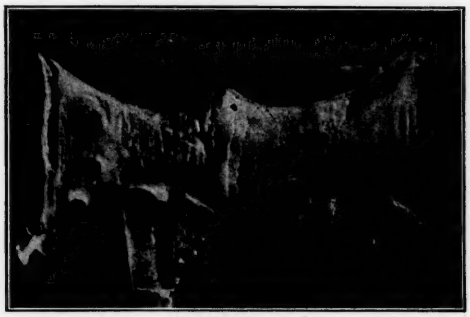

Fig. 9.—Carotid, clamped 168 nours; removed fifteen days later. Complete destruction of intima. Difficult to re-establish lumen of vessel.

the vessel itself, there is found, practically, an absolute return to normal conditions, a slight increase in the number of lymphoid and plasma cells in the adventitia alone being noted.

In two instances the inner coats of the vessel showed changes caused by excessive pressure, which crushed the vessel wall. One of these occurred in a specimen removed thirty-six hours after the application of the clamp. The adventitia in this case is the site of an acute inflammatory process, there being moderate numbers of polymorphonuclear leukocytes, as well as fibrin and serum present in the outer portions of the adventitia. The lining endothelium in one area has apparently been destroyed and the removal of the clamp has not resulted in the return of the vessel to its normal tubular shape. Lying between the separated muscle bundles in the inner part of the muscle coat are collections of red blood

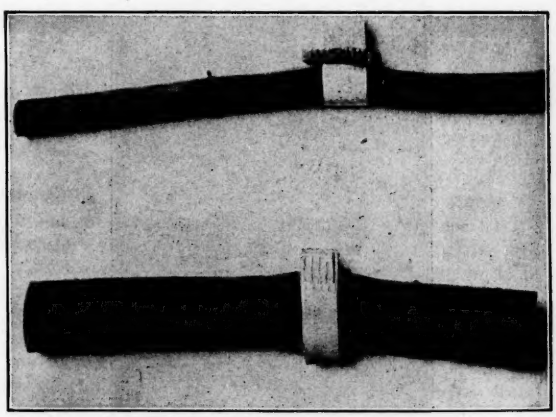

Fig. 11.—Two solid aluminum bands above, old model, thin metal, held in place with lead clip (obsolete); below, latest model, thicker (20 Brown & Sharp's sheet-metal gauge), soft enough to be moulded by digital pressure and thick enough to compress vessel without clip.

cells together with a few polymorphonuclear leukocytes. Lying within the lumen and attached to the wall of the vessel at a point proximal to that area at which the walls are adherent is an oval thrombus containing numerous polymorphonuclear leukocytes (Fig. 16).

The other case is of even greater interest in view of the difficulty which has been constantly experienced in producing

aneurysms experimentally in lower animals by mechanical means. The specimen is a portion of a carotid which had been clamped for a period of seventy-two hours, the vessel being excised shortly after the removal of the clamp. When viewed with the unaided eye this section consists of a vessel 9 mm. in length, having a wall 1 mm. in thickness. The lumen of the vessel at either end measures 2 mm. in width. In the center, however, there is a fusiform dilatation 3.5 mm. in length and 3 mm. in width. Examined microscopically, it is noted that, with the exception of that portion of the vessel surrounding the dilatation, the wall is normal. This dilated portion shows a complete destruction of muscle fibers with

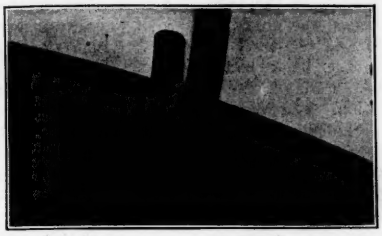

Fig. 12.—Mode of applying aluminum band to artery (rubber drainage tube used as model). The bands are originally cut long enough to be handled and used as aneurysm needle.

the exception of a few nuclei in the outer zone which stain poorly. The tissue in this area is composed of a hyaline or slightly granular staining material, practically devoid of cellular elements. The wall is about half the thickness of that in the more normal-looking portions of the vessel. The endothelium is intact throughout the entire length of the vessel including that portion showing the aneurysmal dilatation (Fig. 17).

Three specimens which were removed after five or six days' clamping show a similar condition to one another. None show marked degenerative processes, but in all the continuity of the lumen has been destroyed, the vessel not having returned to its tubular form. The endothelial lining, however, so far as it can be identified, appears normal, the obliteration of the lumen being due apparently to a loss of

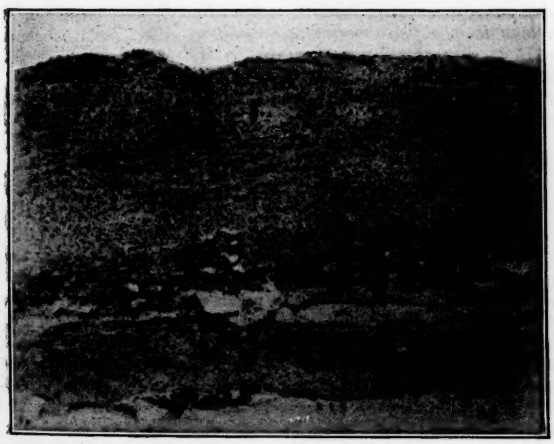

Fig. 14.—From photograph of vessel-wall after application of clamp for seventy-two hours. Note normal appearance. M, media; A, adventitia. Magnified sixty times.

elasticity of the wall rather than to any cohesion of the opposed surfaces. All vessels show a moderate destruction of the muscular tissue and replacement by edematous fibrous tissue, but in none is this process extensive.

CONCLUSIONS

To sum up, it may be stated that unless trauma be sufficiently marked to crush the tissues throughout the entire thickness of the vessel wall, no changes will be noted either in the endothelial lining or in the inner layers of the muscular coat in vessels which have been clamped for seventy-two hours or less. Exactly what may have been the determining factor in the complete degeneration in the musculature preceding the production of the aneurysm described in the last specimen apart from pressure atrophy does not appear evident from the examination of the specimen histologically; the process has apparently progressed very rapidly since we find at the end of seventy-two hours a complete destruction of all the muscula-

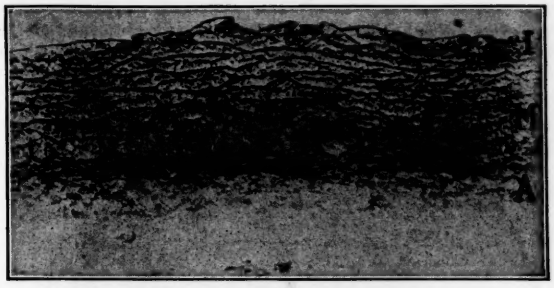

Fig. 13.—From photograph of vessel stained with Weigert's elastic tissue stain, showing normal arrangement of fibers following application of clamp for forty-eight hours. I, intima; M, media; A, adventitia. Magnified fifty times.

ture of the vessel wall. In vessels which have been subjected to clamping for four days or more there does not appear to be the same tendency to return to normal conditions. The lumen remains obliterated, but very little evidence of degenerative changes is seen; thrombus formation is, apparently, not prone to take place.

ADDENDUM.—While this paper is going through the press we have had an additional opportunity to test the value of our removable bands in the occlusion of the common carotid. The results have confirmed so strikingly the argument advanced in the text that we feel amply justified in supplementing it by appending a brief detail of the observation. On Nov. 16, 1910, a white laborer, aged 62, entered our surgical service (Ward 69) in the Delgado Memorial Charity Hospital, pre-

Fig. 15.—From photograph of vessel-wall removed after having been clamped forty-eight hours. Note normal intima and acute inflammatory process in adventitia. M, media; A, adventitia. Magnified fifty times.

senting an advanced carcinoma of the left upper maxilla. The tumor projected as a disfiguring mass from the cheek and was complicated by a large aggregation of glands which filled the left submaxillary and upper carotid regions. As these glands were immovable and adherent to the carotid sheath, as low down as the bifurcation of the carotid, we concluded that a radical operation would be impossible without a block dissection of the glands, which would in all probability neces-

sitate the extirpation of the carotid branches, including the bifurcation and the upper internal jugular. We therefore decided to limit our first occlusion of the common carotid at the point of election in order to test the efficiency of the collateral circulation in the brain. This procedure was carried out at our regular clinic on Monday, November 21. The artery was readily exposed after a preliminary local cocain (Schleich No. 1) and epinephrin anesthesia which was in every way satisfactory. An aluminum band was adjusted to the common carotid, the band being molded and pressed on the vessel with the fingers until the pulse on the distal (cerebral) side ceased to beat. Before this was done, careful note was taken of the pulsation of the opposite right carotid and of the pulses in the peripheral branches (facial and temporal) which

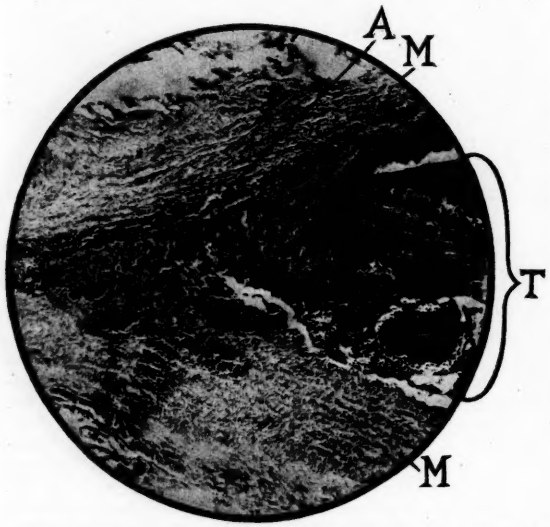

Fig. 16.—From photograph of vessel-wall after clamping for forty-eight hours. Note hemorrhage between muscle fibers in inner third of vessel (A); also, destruction of endothelium and adherent thrombosis (T). M, media. Magnified thirty times.

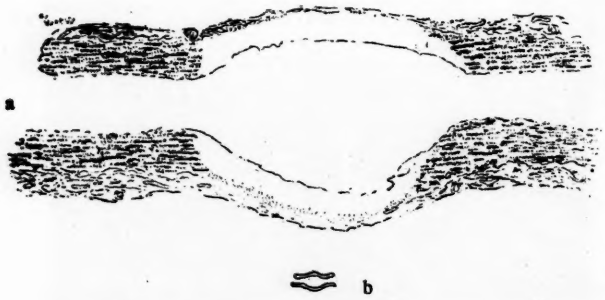

Fig. 17.—Aneurysmal dilatation produced by clamping artery of dog for seventy-two hours with crushing force; the only example of dilatation obtained in our extended work; *a*, appearance same section with low amplification; *b*, actual size of dilated vessel.

were distinctly felt. After the occlusion, it was noticed that the temporal and facial pulses on the corresponding (left) side had practically ceased; while those on the opposite side remained undisturbed. The patient stood the operation perfectly, assisting us in changing the position of the head to suit our purposes. We watched carefully for cerebral symptoms after the occlusion, but the patient never complained; the pupils remained symmetrical, there was no syncopal feeling or dizziness and only a little pallor on the affected side. The patient drank a toddy with relish. The wound was then closed in the usual manner. The artery was occluded at 10:30 a. m., and the patient was on his way to the ward at 11 a. m. Instructions were given to watch carefully for cerebral symptoms. The patient was reported doing well and comfortable until about 6 p. m. when it was noticed that he had become aphasic and very somnolent and almost completely hemiplegic on the right side of the body. We were quickly notified of the occurrence by the intern of the service and one of us (Dr. Allen) at once proceeded to the bedside. He found the condition of the patient as above stated; the stupor amounting almost to coma, with vomiting, marked dyspnea and rapid, weak pulse 120, temperature subnormal.

All these manifestations came on rather suddenly. After some unfortunate delays, the wound was reopened with aseptic precautions and the band removed at 7:30 p. m. about one hour and a half after the brain symptoms had been recognized. After the removal of the band, the circulation in the carotid and its branches was quickly restored. The peripheral pulses in the facial and temporal could be felt, and the artery pulsated where the band had previously compressed it. No damage had been done to the artery apart from a slight edematous indentation. The wound was closed with sterile adhesive strips and occluded with sterile dressings. During the night that followed the patient roused more easily, the pulse fell to 90 and the respiration improved. The next day, Tuesday, November 22, the patient was still more lucid, though aphasic, and less paretic in the right arm and leg.

He swallowed well and maintained a good state of nourishment. On Wednesday, November 23, there was marked and decided improvement in speech; no somnolence or stupor; the hemiparesis of arm and leg was rapidly disappearing. Thursday, November 24, patient's mental state was practically normal. Speech was no longer impaired; there was no aphasia: he had regained full control of arm and leg. All that remained was a tingling and slight numbness in the right arm and leg. Here, then, we have a conclusive demonstration of the complete recovery of the brain after a period of ischemia in the left hemisphere lasting about nine hours, and a complete functional recovery in about sixty-two hours after the removal of the occluding band. It is probable that if the band had been removed immediately on the appearance of the first symptoms the period of repair would have been shortened considerably.

As it is, the value of the band as a preliminary test of the competence or incompetence of the cerebral collaterals has been convincingly demonstrated. Had the artery been ligated in the old-fashioned way it is more than probable that irreparable damage would have followed and that we should have had to deplore a calamitous fatality instead of rejoicing at a happy rescue from a most menacing situation.

It is also significant that this is the second time in our experience with fifteen carotid occlusions in which grave cerebral complications have been avoided by the timely removal of our metallic band.

2255 St. Charles Avenue.

ABSTRACT OF DISCUSSION

DR. GEORGE W. CRILE, Cleveland: Since hearing Dr. Matas' paper in Washington, I have had an opportunity to test his methods in two cases. In some instances one knows from the symptoms present precisely the point of election for amputation of an extremity, but when there is doubt as to the point of election this method of Matas and Allen is an excellent one. The extremity is blanched up to the pelvis with an Esmarch bandage, making the limb ischemic, and then the femoral artery is compressed to let the operator watch the collateral circulation. In that way one gets a definite line, a blush or erythema, which marks the point of election for the amputation. In operations on the brain, or in operations requiring closure of the carotid artery, the brain must be considered, and here it is a matter of extreme value to us to have this method. In operations on the head and neck, I have closed temporarily the carotid artery more than one hundred and fifty times. I have found among these observations many things bearing on the points made by Dr. Allen. In younger subjects one almost never observes unfavorable symptoms, but in aged subjects I have seen rather marked phenomena. For instance, in operations with closure of the common carotid artery, in a patient over 70 years old, I have seen slight

delirium for a day after the occlusion of the artery for half an hour. We now know exactly what has happened, thanks to the investigations on anemia of the brain. The brain cells do not endure a total anemia lasting more than six or seven minutes. When they are subjected to anemia lasting longer than that, a permanent degeneration of certain cells occurs. They are the cells of the cortex. It therefore becomes necessary that the collateral circulation be tested under certain circumstances before we dare hazard the closure of the common carotid artery. This is particularly true when one is obliged to make permanent closure of the artery. It is by methods of this kind that one can test the collateral circulation of the brain to see whether or not such a permanent occlusion can be made.

Whenever the circulation of the brain is impaired by old age or other reasons, temporary occlusion of the common carotid artery produces some interference with cerebration. Such a case is not a safe one for permanent occlusion, and we know very well that in permanent occlusions of the common carotid artery softening of the brain is a sequence, depending on the age of the patient—in young patients not more than 10 per cent. If one were to tie the common carotid artery in 100 patients over 70 years of age, one would probably find impairment of the cortex of the brain, up to complete softening of one side, at least in 90 per cent. Therefore, I regard closure of the common carotid artery in older subjects as a very hazardous procedure.

DR. D. N. EISENDRATH, Chicago: The field which this paper has opened up is coming to be of considerable practical surgical importance. Dr. Strauss and I have been carrying on a series of experiments during the past winter, endeavoring to imitate as closely as possible the temporary closure of the arteries and veins of the kidney during the removal of renal calculi. In order to imitate these conditions as closely as possible, we undertook a series of experiments on rabbits, compressing the renal artery and vein for 15 minutes, then for 30, then for 45 minutes, 1 hour and 2 hours. The results of our experiments, in brief, are these: With the rabbit's kidney, which is very sensative (there is scarcely any animal whose organs are more sensitive to arterial anemia than those of the rabbit), at the end of 15 minutes there was a slight amount of cell infiltration. At the end of 30 minutes this had slightly increased. At the end of an hour the parenchyma of the kidney showed marked signs of parenchymatous degeneration and of calcification. After 2 hours the changes were profound. These animals were killed at the end of 4 weeks. The animals killed after 48 hours showed very slight changes indeed. This emphasizes the fact that one can keep up compression on these arteries without very much influence on the parenchymatous structure of the organs, for at least a short space of time.

DR. C. W. ALLEN, New Orleans: Dr. Crile brought out a very important point—the age limit of the patient. The nearer the patient to 45 years of age, the greater the danger of closing either of the carotids. We have found, however, that this was not always reliable, as demonstrated in several cases in which anomalies have occurred. In these cases, the circle of Willis was not competent to supply both sides of the brain, the communication between the two sides not being sufficient. In conditions of this kind, trouble is likely to arise, no matter how young the patient. The determination of these conditions before permanent occlusion of the carotids was one of the needs that stimulated our developing this method. Another point which Dr. Eisendrath's remarks suggested is that we have found the bands extremely useful in operating in a limited space, where it is necessary to secure hemostasis and very little room is found available for the application of a clamp, even the size of a Crile clamp; in these cases the band will take up almost no room.

Comatose Malaria.—H. L. Sutherland states that the treatment of this condition may be summed up in plenty of quinin hypodermically and ice-caps to the head. To attempt to give medicine by mouth is, he says, worse than useless, as the jaws are locked in nearly all cases, and deglutition is very uncertain.—*Memphis Medical Monthly.*

ARTERIOSCLEROSIS OF THE UTERINE VESSELS

WITH A CONSIDERATION OF THE CAUSE OF HEMORRHAGE AND REPORT OF CASES *

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In the history of this condition we find a cycle such as is common in many medical subjects. At first only the changes in the uterine muscle and blood-vessels were considered. After Olshausen's introduction of the curette attention was centered on the endometrium. All irregular bleeding was attributed to changes in this structure, and an almost infinite number of classifications and varieties of endometritis resulted. The work of Adler and Hitschmann,[1] which was later verified by Norris and Keene,[2] has shown that much of that which was formerly considered pathologic in the endometrium is simply the normal change that occurs in the menstrual cycle.

But long before this work on the endometrium was done, attention began to be directed again to the changes in the blood-vessels and uterine muscle. I shall not attempt to review all the literature on this subject but shall refer to only a few of the more important articles. Findley[3] in 1901 was one of the first in America to write on this subject, notwithstanding operators had been removing the uterus for this condition for several years before. The case he reports was one of the so-called "apoplexia uteri" due to an embolism of the uterine arteries, which was probably cardiac in origin. In his later paper[4] he attributes the hemorrhage to a muscular insufficiency, and this in turn to an overgrowth of the fibrous tissue, both between the muscle bundles and about the arteries. With these conclusions I do most heartily agree concerning the value of the uterine muscle in the control of hemorrhage. Anspach[5] demonstrated that the increased connective tissue in and about the arteries was very largely elastic rather than fibrous tissue. He suggested that, as this elastic tissue was so commonly found in the uteri of multiparæ, its presence was physiologic rather than pathologic and that the hemorrhage in these cases was due to a lack rather than an excess of elastic tissue.

Goodall[6] has made another and very decided advance in our knowledge of these cases. He has shown that the uterus after each pregnancy develops a complete new set of arteries; that where the difference in size between the old artery and the new one is great as in the placental area, a complete new vessel with three complete new coats is formed within the lumen of the old one; but where the difference in size is less marked, part of the old vessel is retained and is incorporated as a part of the wall of the new vessel. Normally the unutilized portions of the walls of the old vessels undergo hyaline degeneration and are completely absorbed. This is the ideal involution. But when some local disturbance or constitutional condition complicates the puerperium, the change is less perfect and the muscularis of the old ves-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

1. Adler and Hitschmann: Monatschr, f. Geburtsh, u. Gynäk., xxvii, part 1.
2. Norris and Keene: Surg., Gynec. and Obst., x, No. 1, p. 44.
3. Findley, Palmer: Am. Jour. Obst., xliii, 30.
4. Findley, Palmer: Am. Jour. Obst., lii, 71.
5. Anspach: Univ. Penn. Med. Bull., xviii, No. 12, p. 322.
6. Goodall: Am. Jour. Obst., lx, No. 6, p. 921.

sel, after the hyaline degeneration has taken place, is replaced by elastic tissue instead of muscle. This is in accordance with Nature's law to do the best thing possible under the conditions present. Where the disturbing factor is very severe, and particularly in patients past 35 years of age, instead of elastic tissue, Nature produces a structure even lower in the scale, that is, fibrous tissue.

Pankow,[7] in an effort to find some definite pathology for these cases, examined fifty-two uteri, excluding all benign or malignant new formations and fresh or old inflammation. He says:

From a comparative anatomic examination of uteri from bleeding and non-bleeding multiparæ and nulliparæ there is no evidence of anatomic change to account for hemorrhage. All the changes in the myometrium considered in causal relation with bleeding are found only in part of the clinical bleeding cases, and are found in others having no clinical history of bleeding.

Fig. 1.—Normal vessels from girl aged 18. Never pregnant. Uterus removed on account of double pyosalpinx.

He concludes that "there is therefore nothing characteristic for bleeding uteri."

In his later paper Anspach[8] minimizes the influence of the arterial and muscular changes in the causation of hemorrhage and suggests that the cause is some other condition, as endometritis, lacerations, displacement of the uterus, pelvic inflammation or pelvic congestion from disease of the heart or kidneys. The objection to considering these conditions as the primary cause is the fact that they are so commonly found without any accompanying disturbance of the menstruation.

Out of twenty-five patients who have had a hysterectomy for hemorrhage in the past five years, I have studied the uteri of eleven. These were all in which I was able to find both the specimen and a history sufficiently detailed to justify examination. In addition to these I have studied the uteri from three other multiparæ which had been removed for other causes; one an enlarged uterus that had been causing pain, one a complete prolapse, and one for a very hard suspicious cervix, although curettings and pieces of the cervix were reported not malignant. The patient, one year past the menopause, had no hemorrhage, but a slight leukorrhea.

7. Pankow: Ztschr. f. Geburtsh. u. Gynäk, lxv, 336.
8. Anspach: Surg., Gynec. and Obst., ix, No. 3, 315.

Specimens were taken from just below the level of the tubes, about the internal os and from the cervix where it had been removed. Sections were made to include the entire thickness of the uterine wall, and were stained with hematoxylin and eosin, Van Giesen, Weigert and Van Giesen and Weigert carmin.

Gross Pathology.—On account of the hardening and shrinkage, it was very hard to draw conclusions concerning the size of the uterus, particularly as many of them had been removed by a supravaginal hysterectomy. Those that had been removed recently all showed an enlargement of varying degree. On cut section the vessels stand out quite prominently and appear to be larger in size and more numerous than normal. I was able to be more certain of this in three cases in which operation had been performed recently. In the specimens that had been in preservation for a long time, this feature was not so apparent.

It would seem that this increase in number and size of the vessels had some etiologic relation to the hemorrhage.

Endometrium.—One patient had a polypoid endometritis with a history of a curettement two years previously and removal of a polypus at that time. The endometrium in the other ten showed varying degrees of thickening, depending on the relation to the menstrual period, but nothing that was characteristic of hemorrhage could be found.

Muscle.—There was in all the cases some increase in connective tissue. In some the fibrous tissue predominated, in others the elastic. The development of elastic tissue between the muscle bundles did not seem to bear any relation to the severity of hemorrhage either for or against it, *e. g.*, in Case 1 with a moderate development of elastic tissue there was very severe hemorrhage, and in Case 2 with equally severe bleeding there was a very marked increase of elastic tissue. The same can be said of the fibrous tissue. No difference could be detected by the pathologic examination between the cases with hemorrhage and those having no such history.

Fig. 2.—Case 8—Moderate hemorrhage. Moderate arteriosclerosis.

Blood-Vessels.—The arteries all show some increase of elastic tissue, particularly around the vessel. This, I take it, is the subinvolution to which Goodall called attention.

But I could not trace any connection between the amount of elastic tissue and the severity of the hemorrhage, or its presence or absence.

There is one class of cases to which little attention has been given. That is those in which there is a marked dilatation or varicose condition of the veins of the uterine wall.

The only case I have been able to find in which there has been a hemorrhage from a rupture of such a vein is the one reported by Dr. Simpson, in 1905.[9] But I have records of four others in which there was a very decided dilatation of the veins, particularly of the cornu of the uterus and a varicose condition of the veins of the broad ligament.

In all but the first of these cases the diagnosis was made before operation by Dr. Simpson. In all the uterus was very soft and there were varicose veins of the vagina or labia; so that it would seem possible to make at least a tentative diagnosis before operation where the patient gives a history of menorrhagia or metrorrhagia, where a very soft uterus is found on examination and the curet shows carcinoma not present. Such patients are likely to have varicose veins in other parts of the genital tract.

Microscopic examination in these eleven cases failed to show anything present in the cases of hemorrhage that was absent in the ones without such a history, or the converse; so that I must agree with Pankow, who concludes that it is impossible to tell from the history what the microscopic picture will be, and also that it is impossible from the miscroscopic examination to construct a clinical picture.

Fig. 3.—Case 5—Quite severe hemorrhage. Marked arteriosclerosis.

It has long been known that proper uterine contraction is the chief factor in the control of normal uterine bleeding.

Attention was directed to this again by Findley,[10] and recently by Norris and Barnard.[11] These writers called attention to the fact that the menstruating uterus is larger and has a larger cavity than the non-menstruating one. Bell and Hicks[12] have shown a regularly recurring contraction in the menstruating uterus of rabbits which were absent at other times. This leads us to believe that during the interval between menstrual periods the uterine muscle is in a state of tonic contraction and that there is during the menstrual period a relaxation and consequent hemorrhage. The relaxation and coincident hemorrhage that occurs at times during a curettement is a common experience, and the necessity of securing proper uterine contraction post partum is well known. The influence of ergot in the control of hemorrhage is equally well known.

With our present pathologic methods it is impossible to estimate the functional power of muscle tissue, so

Fig. 4.—Case 9—Very severe hemorrhage. Moderate arteriosclerosis.

that it is not possible to demonstrate loss of functional power of the uterine muscle.

But it is now known that the increase of elastic and fibrous tissue in the multiparous uterus, although very common, is pathologic and due to some disturbance during the puerperium. It would seem reasonable to infer that there has been some loss in strength in the muscle, either from the same condition which caused the increase in connective tissue, or as a result of its presence. This would seem to me to furnish the predisposing cause for hemorrhage.

From the fact that this disturbance must have been active and produced its effect during the last puerperium, which in many cases was a number of years before the onset of the hemorrhage, we must look to something other than these puerperal changes for the immediate cause of the bleeding.

I would suggest that the increase in size and number of the vessels seen has some and possibly a very decided influence.

Whether this is an actual increase in vessels or merely a dilatation of those already present we do not know. The latter is more probable.

As I have stated, lacerations and displacements without excessive bleeding are so common that they do not seem to be an adequate cause of hemorrhage. One of my cases had a prolapse fourteen years before the beginning of her menorrhagia, and this was the only one of a moderately large series of prolapse cases in which bleeding of any moment occurred.

9. Simpson: Am. Jour. Obst., lii, No. 5.
10. Findley, Palmer: Am. Jour. Obst., lii, 71.
11. Norris and Barnard: Am. Jour. Obst., lxi, 753.
12. Bell and Hicks: Brit. Med. Jour., 1909, i, 517.

Four of my eleven patients had probably had chronic nephritis as shown by the urinary findings. Two patients had had recent operations for repair of laceration, and bleeding became so severe while they were in bed that hysterectomy was necessitated. Another one had had a recent abortion and mild infection with a consequent local congestion. The other five gave no history of anything that would seem to be an adequate exciting cause except that they were all in the neighborhood of 40 years of age, when it is common to find general arteriosclerosis and a general rise of blood-pressure. This would seem to be worth investigating carefully.

Fig. 5.—Case 3—Moderate hemorrhage. Marked arteriosclerosis.

Although I admit that my cases are too few to permit definite conclusions to be drawn, yet I would suggest as immediate causes for hemorrhage, (1) the increase in size and number of the blood-vessels, (2) a general increase of blood-pressure from kidney disease or general arteriosclerosis, (3) local acute congestions, (4) and anything that causes a general or local loss of muscular tone.

Treatment.—One cannot pass these cases without mentioning the necessity of excluding carcinoma. This can usually be done only by the examination of curettings and in some a section from the cervix. Even a history of hemorrhage for a number of years previous is not sufficient, as carcinoma may be a later development. This was the case in No. 3 of my series. There was a history of menorrhagia for four years, with the onset of metrorrhagia fifteen months before. At the time of operation a border-line case of carcinoma of the cervix was found.

The majority of the cases come finally to hysterectomy and we would agree with Gardner and Goodall[13] that we should be even more radical in advising this course than we have been in the past.

CONCLUSIONS

1. Proper uterine contraction is essential to the control of uterine bleeding.

2. There is no definite pathologic condition present in these cases that is not found in others not giving any history of hemorrhage, with the probable exception of the increase in number and size of vessels.

3. Some loss of functional power of the uterine muscle is the predisposing cause of bleeding in cases of arteriosclerosis.

4. This loss of functional power is due either to the development of fibrous and elastic tissue from subinvolution, or to the condition which caused this subinvolution.

5. The exciting causes are probably many. I would suggest the increase in size and number of vessels, general increase in blood-pressure from kidney disease or general arteriosclerosis, passive congestion from heart disease, local congestions, or general muscular weakness.

I want to take this opportunity to express my indebtedness to Dr. Simpson for the privilege of studying these cases from his clinic, and to Dr. Proescher for his help with the pathologic work.

REPORT OF CASES

CASE 1.—Mrs. B., aged 29, admitted June 3, 1907; married, two children, two abortions; last seven weeks ago; recent menstrual history, profuse and irregular; almost constant and profuse bleeding since last abortion; dilatation and curettage on admission; bleeding not controlled; very severe hemorrhage two weeks later.

Operation.—June 21, 1907, a supravaginal hysterectomy and bilateral salpingo-oöphorectomy were performed.

Gross Pathology.—Uterus about three times normal size, very soft and flabby; palpable arteriosclerosis of uterine arteries; endometrium not thickened; tubes closed, ovaries slightly cystic.

Microscopic Examination.—Endometrium normal; moderate, diffuse increase of fibrous tissue throughout the muscle; moderate increase of elastic tissue around vessels and in the subperitoneal layer.

Fig. 6.—No hemorrhage. Very marked arteriosclerosis about vessels. Patient aged 50; 6 children. Uterus removed on account of chronic metritis and cervicitis. Menopause 1 year before.

CASE 2.—Mrs. F., aged 40, was admitted Sept. 7, 1907. Puberty occurred at 15; menstruation was regular, lasting from three to six days; married at 19; seven children, youngest 5 years old; no abortions. For the last two years patient had been menstruating irregularly at eleven to twenty-four-day intervals, period lasting from three to six days and being very profuse, leaving her weak after each period; no interval bleeding.

Operation.—Sept. 9, 1907, dilatation and curettage perineorrhaphy, supravaginal hysterectomy and left salpingo-oöphorectomy were done.

13. Gardner and Goodall: Brit. Med. Jour., 1906, ii, 1173

Gross Pathology.—Endometrium appeared normal, and reported not malignant from frozen section; uterus size of five weeks' gestation; palpable arteriosclerosis of uterine arteries; in fundus and particularly in both cornua are large veins 2 to 4 mm. in diameter; tubes normal; both ovaries slightly cystic.

Microscopic Examination.—Marked increase of fibrous tissue and of elastic tissue about vessels, most pronounced in vascular layer.

CASE 3.—Mrs. O., aged 42; puberty at 15; menstruation was regular each twenty-eight days, lasting from four to five days; amount moderate. Married at 24; three children; last twelve years ago; no abortions; repair of laceration one year ago; moderate menorrhagia the past year.

Operation.—May 4, 1908, combined vaginal and abdominal hysterectomy, bilateral, salpingo-oöphorectomy and appendectomy.

Gross Pathology.—Uterus slightly enlarged; palpable arteriosclerosis; tubes normal; ovaries cystic.

Microscopic Examination.—Very marked, diffuse increase of fibrous tissue; marked increase in elastic tissue about the vessels.

CASE 4.—Mrs. W., aged 48, admitted May 11, 1908; puberty at 12; menstruation regular each twenty-eight to thirty days, lasting from three to seven days; irregular past two years; moderate menorrhagia. Married at 29; one child 16 years old; no abortions.

Operation.—May 13, 1908, combined vaginal and abdominal hysterectomy and right salpingo-oöphorectomy.

Gross Pathology.—Uterus enlarged, twice normal size; palpable arteriosclerosis; right tube normal; right ovary cystic.

Microscopic Examination.—Diffuse increase of fibrous tissue through all layers, more marked in vascular and submucous layers; marked increase of elastic tissue about the vessels and vascular layers.

Fig. 7.—No hemorrhage. Quite marked arteriosclerosis. Excess of elastic tissue in vessel walls. Patient aged 41. Menstruation normal. Prolapse of uterus.

CASE 5.—Mrs. E., aged 47, admitted Jan. 11, 1909; puberty at 14; menstruation irregular. Married at 26; four children, youngest 14; no abortions; menstruation irregular for eleven years; for past two years menorrhagia and metrorrhagia quite severe.

Operation.—Jan. 15, 1909, supravaginal hysterectomy.

Gross Pathology.—Uterus normal size; palpable arteriosclerosis; tubes normal; left ovary slightly cystic (not removed).

Microscopic Examination.—Endometrium not thickened; chronic interstitial endometritis; marked increase of fibrous tissue through all layers; marked increase of elastic tissue around vessels and submucous and vascular layers.

CASE 6.—Mrs. T., aged 42, admitted Jan. 24, 1909; puberty at 12; menstruation irregular; each four to seven weeks; lasting from seven to ten days; one child; menorrhagia past six years. Two years ago dilatation and curettement for cervical polyp and perineorrhaphy were done. Menorrhagia has continued.

Operation.—Jan. 27, 1909, combined vaginal and abdominal hysterectomy, bilateral salpingo-oöphorectomy and appendectomy were performed.

Gross Pathology.—Polypoid endometritis; varicose veins of both cornua of uterus, diameter 2 to 4 mm.; tubes adherent, closed; ovaries cystic.

Microscopic Examination.—Marked increase of fibrous tissue and vascular layer, chronic interstitial endometritis; not glandular, but hypertrophic. Slight increase in submucous layer; slight increase of elastic tissue about the submucous layer, no increase in vascular layer; slight diffuse increase in subserous layer.

CASE 7.—Mrs. W., aged 43, admitted Feb. 4, 1909; puberty at 18; menstruation regular every twenty-eight days, of five-days' duration; moderately profuse. Married at 21; seven children; last, eight years ago; one abortion ten years ago. First noticed prolapse of uterus seventeen years ago; for past two and one-half years menstruation irregular; every two to five weeks, lasting five days; profuse menorrhagia.

Operation.—Feb. 6, 1909, vaginal hysterectomy and perineorrhaphy.

Gross Pathology.—Hypertrophy of the cervix; uterus normal size; palpable arteriosclerosis.

Microscopic Examination.—Endometrium thickened; interstitial endometritis; no increase of glandular tissue; marked increase of fibrous tissue throughout, and of elastic tissue about all vessels.

CASE 8.—Mrs. A., aged 44; puberty at 12; menstruation regular every twenty-eight days, three to four days' duration. Married at 22; four children last nine years; all died in infancy; four miscarriages; last five years ago; for past six months moderate menorrhagia and metrorrhagia.

Operation.—Sept. 14, 1906, perineorrhaphy, supravaginal hysterectomy and appendectomy.

Gross Pathology.—Endometrium about normal; uterus two and one-half times normal size; palpable arteriosclerosis; varicose veins in both cornua; tubes and ovaries normal.

Microscopic Examination.—Marked diffuse increase in fibrous tissue in submucous and vascular layers; slight increase in elastic tissue in vascular layer.

CASE 9.—Mrs. P., aged 31; puberty at 17; menstruation regular, lasting from six to seven days. Married at 20; three children; last, two years old; one miscarriage, four weeks ago; for past year patient has had a profuse menorrhagia, lasting two or three weeks; very severe bleeding for nine weeks, about six months ago; stopped for a short time, but has bled almost constantly and in variable quantity since.

Operation.—Feb. 1, 1910, supravaginal hysterectomy and appendectomy.

Gross Pathology.—Endometrium normal; uterus normal size; palpable arteriosclerosis; varicose veins of both cornua, 3 to 6 mm. diameter; tubes and ovaries normal.

Microscopic Examination.—Endometrium normal; marked increase of fibrous tissue in all layers; moderate increase of elastic tissue about the vessels and vascular layer.

CASE 10.—Mrs. G., aged 50, admitted Jan. 26, 1910; puberty at 15-16; menstruation regular, of from three to four days' duration. Married at 18; eleven children, youngest 12; one miscarriage, fourteen years ago; four years ago patient noticed menstruation became more profuse and irregular, at two or three weeks' intervals; duration, one week; fifteen months ago she noticed slight metrorrhagia; severe hemorrhage, Nov., 1908, lasting ten days; almost constant bleeding since.

Operation.—Jan. 27, 1910, combined abdominal and vaginal hysterectomy and bilateral salpingo-oöphorectomy.

Gross Pathology.—Carcinoma of cervix with involvement of the right broad ligament; uterus enlarged twice normal size; palpable arteriosclerosis; tubes normal; ovaries slightly cystic.

Microscopic Examination.—Squamous carcinoma of the cervix; endometrium normal; marked diffuse increase of fibrous

tissue; marked increase of elastic tissue, particularly about the vessels.

This illustrates the necessity of investigating these cases carefully, as undoubtedly the bleeding of the arteriosclerosis had antedated for some time the development of the carcinoma.

CASE 11.—Mrs. E., admitted March 3, 1910; puberty at 12; menstruation regular, lasting from three to five days. Married at 23; seven children, youngest three years old; two miscarriages, last eight months ago; menorrhagia began two years ago; dilatation and curettement eleven months ago; bleeding controlled for three months; since last abortion there has been profuse menorrhagia and metrorrhagia, almost constantly.

Operation.—March 6, 1910, supravaginal hysterectomy and perineorrhaphy.

Gross Pathology.—Uterus slightly enlarged; endometrium normal; palpable arteriosclerosis; large vein, 5 mm. diameter, in left cornu; tubes normal; ovaries normal.

Microscopic Examination.—Mucosa thickened; slight increase in glandular tissue; marked diffuse increase of fibrous tissue; marked increase of elastic tissue around the vessels.

ABSTRACT OF DISCUSSION

DR. EMIL NOVAK, Baltimore: It seems to me that the special importance of the study of arteriosclerosis of the blood-vessels of the uterus lies in the possible relation which it bears to uterine bleeding. That, I think, has been well emphasized by Dr. Chalfant. I agree that in certain cases uterine bleeding may be due to such conditions. Furthermore, we also recognize the fact that uterine bleeding is influenced to a considerable degree by the condition of the muscular tissue of the uterus. This seems to be pretty well demonstrated by the manner in which post-partum hemorrhage may be controlled by producing strong uterine contractions. It is not difficult to believe that the fibrous tissue of the uterus may also have some influence on uterine bleeding, as urged by Theilhaber. The point to be emphasized is that in a considerable number of cases—how large no one knows—uterine bleeding is present in the absence of any demonstrable pathologic lesion. It is unjustifiable to strain the imagination into believing that a slight increase in fibrous tissue, or perhaps a slight thickening of the arteries, is the cause of the bleeding, when these conditions, as a matter of fact, may represent normal variations. It seems to me that in a considerable number of cases of uterine bleeding we must invoke, not alone anatomic explanations, but also physiologic causes. Morris has referred to the present as the physiologic era in surgery. We may say also that this is the physiologic era in gynecology. In the explanation of uterine bleeding, we must bear in mind the normal physiology of menstruation. This concerns not only the myometrium, the endometrium and blood vessels, but also some underlying cause which most of us believe to be an internal secretion of the ovary. The importance of the internal secretions of the body has been greatly emphasized within recent years, but not sufficient stress has been laid on their relation to the physiology of the female genital organs. That there is such a relation permits of no doubt. I would like, if time permitted, to speak of the influence in this connection of the pituitary bodies, as has been shown experimentally by Dr. Cushing and others, and also to emphasize the importance of the thyroid hormone or hormones in connection with menstrual physiology and pathology.

In many cases of arteriosclerosis there is no uterine bleeding, and in many cases of uterine bleeding in which arteriosclerosis is given as a cause, such a condition does not exist. In many cases the so-called arteriosclerosis is really a normal process. This has been very well shown by Dr. Goodall and others, in the fact that we find thickening of the arteries in the uteri of women who have borne children. I would like, in short, to re-emphasize the point that in many of these cases of uterine bleeding there is no local anatomic cause whatsoever to which we can assign this symptom.

DR. COLLIN FOULKROD, Philadelphia: The discussion of arteriosclerosis, coming after the discussion of endometritis, makes a very pertinent point come up: Is not the bleeding coming from the same cause coming from two different points in the uterus? In the first place the arteriosclerotic bleeding is due, no doubt, to some cause within the patient's body. Contrary to Dr. Novak, if it is not due to the intima, there must be some cause which acts on the intima of the vessels and causes a condition, which is either anemia of the structures, which will not permit strong contraction of the blood vessels, or some other condition which precludes the possibility of contraction of the blood vessels. The result is the same. The few cases that have been classified have been those which we have not attributed to the arteriosclerosis or the general condition. There are few cases in which you do not find some demonstrable lesion either in the system or in the uterus itself.

AN ASPIRATING DEVICE

J. H. WILLIAMS, M.D.
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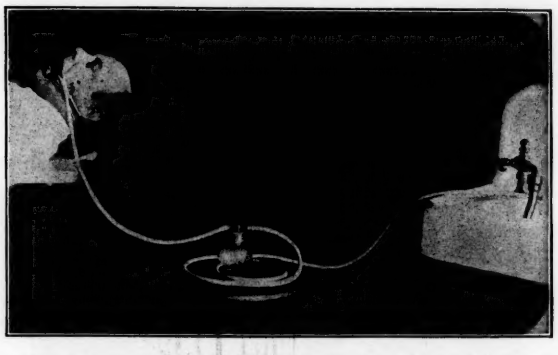
The idea here illustrated is an addition to the siphon used by dentists; the water, passing rapidly down the specially constructed metal tube attached to the faucet, produces suction in the rubber tubes and glass container. The blood, mucus, and some air in the patient's throat, pass into and through the hard rubber mouth attachment and are continued along the rubber tube to the glass container, where the blood and mucus are deposited, the



Hydraulic aspirator, for keeping the mouth and throat clear of blood and secretions in operations about those parts.

air going on through the second tube from the container to the faucet, and out with the passing water.

In all operations within the mouth or throat under general anesthesia, especially the removal of adenoids and tonsils, this apparatus is designed to keep the field of operation clear; to obviate the necessity of sponging, thereby reducing the number of assistants, and also to preclude the possibility of the patient aspirating or swallowing the exuded blood, etc.

25 Groton Building.

Infant-Feeding.—T. N. Gray, in *Archives of Pediatrics*, states that no amount of study and observation will equip a physician to treat any baby but the one which he can see, handle and examine. He believes that the artificially fed child has as much to fear from falling into the hands of a physician who has never thought of his individuality, or from a mother who is willing to feed it a modification advised by one who has never seen it, as it has from bacterial contamination of milk.

COUGH DURING AUSCULTATION IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS

A PLEA FOR ITS ROUTINE EMPLOYMENT TO ELICIT FINE RÂLES:—TECHNIC AND CONVENIENT SIGNAL

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The diagnosis of active pulmonary tuberculosis by the average clinician depends quite frequently on the finding of fine râles. There are earlier physical signs, but in the absence of bacilli none is of so much significance.

The râles most important in diagnosing pulmonary tuberculosis are not heard during ordinary respiration. A light cough at the end of expiration may reveal, during the inspiration following, fine adventitious sounds, indicating a lesion, before the Röntgen rays will cast a shadow of it, long before the percussion note is impaired, and frequently before the normal respiratory murmur is modified. This simple expedient is described in most text-books on physical diagnosis and is resorted to by all expert clinicians. Its omission is even noticed at once by an experienced patient. But it is believed that the average busy doctor sometimes neglects it. The following description of the technic employed for several years by officers of the Public Health and Marine-Hospital Service at the Fort Stanton Sanatorium, is given, therefore, not with the idea that it is new, but rather to emphasize the importance of a well-established diagnostic procedure:

The usual inspection of the chest is first made, measurements taken, palpation and percussion completed and the gross pathology ausculted during quiet breathing and with spoken and whispered voice.

Breathing.—It is best in beginning auscultation to give no instructions as to breathing, because some will need no correction and are rendered so self-conscious by it that their normal rhythm is disturbed. In a large number of cases it will transpire that instruction must be given and it can be adapted to the individual case. Instances in which deep breathing is required are very exceptional, and, since it produces confusing muscular crackles, it is rarely useful in eliciting fine adventitious sounds.

Cough.—Just at the end of a normal expiration, at the signal, the patient gives a short and easy but audible cough. This expels part of the residual air and will be followed instantly by an inspiration, the first part of which will naturally be involuntarily accentuated. With stethoscope on the subject's chest the examiner disregards the muscular noises produced by cough and concentrates his attention on adventitious sounds during the inspiration immediately following. In some cases the first part of this inspiration is most fruitful in fine râles; sometimes they appear only near the close of the act.

Signal.—A signal system is necessary in directing the patient, because the examiner's voice will cause vibrations in his stethoscope. As the physician stands or sits opposite the erect form of his patient one hand naturally rests on the subject's shoulder or arm to afford the steadiness necessary in delicate use of the stethoscope. One finger of this hand can be used to give the signal to cough, with no more preliminary instruction than, "Cough once when I tap you." This may have to be supplemented a little later by, "Do not take a breath before you cough," or "Cough just as soon as you get the signal," and occasionally by the admonition, "Do not swallow after you cough," this act producing peculiar gurgles and coarse sounds. In exceptional cases a proper amount of residual air is not expelled in this way; in that case the instructions may be modified to, "When I tap you blow out your breath and cough." Advice is not usually required concerning the inspiration following. If part of the residual air has been expelled it will be right if naturally taken. But occasionally in a thick-walled, or poorly expanding chest, or in one in which a thickened pleura masks the situation, it may be desirable to accentuate the inspiratory sounds, and one may direct the subject to take a quick breath after the cough, or when signaled by two taps of the finger or by pinching the skin of the shoulder with the free hand. It may be repeated that a deep, muscle-stretching, rib-cracking inspiration is not desired to elicit râles.

Nothing is more painful to witness than a subject who has been directed to "cough" or to "take deep breaths." A very few minutes of such gymnastics are sufficient to exhaust even the most robust. But if such movements are under easy control the examiner can order them at appropriate times and judicious intervals without tiring his patient.

The physician who looks only for those gross lesions which manifest themselves by dulness, cavernous breathing, whispered pectoriloquy, coarse râles, etc., may err both in diagnosis, when these are absent, and in prognosis when the advent of new areas of involvement are

Technic by which to have patient cough at the desired time, during auscultation. A tap of the finger is signal for a short cough, at the end of expiration; a pinch, or two taps, for a quick inspiration.

overlooked while the older lesions are under observation. Those who give too much significance to some of the ultrarefined and doubtful physical signs, frequently make the opposite mistake. The amateur may be confused by a dry or hairy skin if he neglect to oil or shave the part, but the same man will elicit dulness over a healthy chest if he percuss it close to a wall, or miss an area of consolidation because he allows his plexi-meter finger to bridge two ribs. In fact, if he allows no garment between his stethoscope and the skin and no folds of clothing near enough to move on the chest with squeak and rustle at every respiration, there is less chance of error in a properly elicited fine râle than in anything else the examiner sees or hears.

Burns and Acidosis in Children.—In children, burns and scalds are frequently followed by acidosis and acid intoxication, particularly if the burn be superficial and extensive.—E. R. White, in *Australian Medical Journal.*

PELLAGRA, WITH THE ANALYTICAL STUDY OF FIFTY-FIVE NON-INSTITUTIONAL OR SPORADIC CASES

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Pellagra is a disease which has been known in Italy and other European southern countries for nearly three hundred years. It has since been reported from most semitropical countries from Asia Minor to Texas. In the United States isolated cases were several times reported, but the disease was not known to occur in quantity until 1907, when it was recognized independently by Merrill, Searcy and Babcock. Up to the present time probably five thousand cases have been recognized in the United States, chiefly confined to the south Atlantic states and one or two states in the middle west. The disease is unquestionably rapidly increasing in the United States and although it might have existed in this country unrecognized for many years, still it must have been extremely rare until 1907. It now bids fair to become a national problem.

Fig. 1.—Author's case of pellagra, with lesions of the hands, forehead and alæ of the nose.

As pellagra is so frequently reported in numbers from the institutions for the insane, a fact to be positively ascertained is whether in these institutions the pellagrins were not admitted with the disease, either in the stage of remission or with its lesions unrecognized. The fact that pellagra has been considered a disease beginning in rural districts makes this question of great practical importance. Assuming that the disease does originate in rural districts, the cause must be looked for in these localities. On the other hand, if we can prove that the disease frequently originates in institutions, then there must be local, demonstrable and correctable causes to be found in these institutions.

The maize theory of causation has certainly not been proved. Taylor[1] quotes Palidino's observation that the use of good maize did not decrease pellagra in Mantua. Sambon and others state that pellagra is found where corn is neither grown nor eaten. Thorington[2] says that if spoiled maize was the cause of pellagra there would not have been enough southern soldiers left after the Civil War to rehabilitate the South. He believes it parasitic in origin. Among the theories of cause advanced Reed[3] gives the fungus *Diplodia zeæ* as a possible factor; Sambon believes the sand-fly to be the carrier of the infective agent; Rohrer[4] thinks it due to the fungus *Aspergillus fumigatus;* Auld[5] attributes the disease to a magnesium infiltration from the ingestion of maize; Tizzoni and Wood[6] have isolated a bacillus which they believe is the cause; Long[7] believes that amebas in the stools have a definite relation to pellagra, while Raubitschek[8] thinks the cutaneous lesions due to an alimentary poison, probably a lipoid constituent from corn, plus the chemical rays of sunlight.

Hyde, Lavinder and Griffin do not believe that pellagra is communicable and this view is generally accepted. As far as I have been able to learn no physicians, nurses or attendants have ever contracted the disease outside or inside of an institution from having attended patients with pellagra.

Pellagra occurs in two forms, one an acute fulminating form, and the other a chronic form with seasonal recurrences. The fulminating form runs a course of from a few weeks to a few months and is frequently fatal. If apparent recovery takes place the disease returns again the following year and may then be classed as chronic. The fulminating form has been called "typhoid pellagra," but for obvious reasons it is best not to use the word "typhoid." The chronic form occurs in two types. In one the disease appears in the spring, runs a course more or less severe during the summer, has almost a complete remission in the winter and recurs the following spring. In the other, a rare type, exacerbations occur both in the spring and in the fall with summer and winter remissions. In the chronic form the spring recurrences usually become more and more severe and the disease is usually fatal in from two to seven years. As the seasonal recurrences take place regardless of the ingestion of maize, this seems to be an argument against the zeist theory. It would seem only reasonable, if the disease was caused by maize toxemia, that when this toxin became so eliminated that a complete arrest of symptoms occurred there could be no recurrence.

SYMPTOMS

The symptoms of pellagra are numerous and will be taken up in detail in the analysis of the cases to follow. In general it may be said that they consist of three sets, the exact relation of which to each other has never been satisfactorily explained. The symptom-groups are gastro-intestinal, cutaneous, and nervous and mental. Most writers do not put them in this sequence but mention the cutaneous manifestations first. I feel confident, however, that this is erroneous, and the reason for it is that the majority of reported cases have been from institutions of the insane where diarrhea and gastritis are so common that the date of their onset in pellagra cases has not been noted.

Special examinations of the blood, urine, feces, eyes and temperature have thrown but little light on pel-

1. Taylor, J. H.: New York Med. Jour., Dec. 18, 1909, Vol. xc, No. 25, p. 1208.
2. Thorington, Chilton: Pellagra—Not Established that It Comes from Bad Meal, Gulf States Med. and Surg., January, 1910, p. 48.
3. Reed, Howard S.: The Fungus *Diplodia* as a Possible Factor in the Etiology of Pellagra, New York Med. Jour., Jan. 22, 1910, p. 164.
4. Rohrer, C. W. G.: Tr. Nat. Conference on Pellagra, Columbia, S. C., Nov. 3-4, 1909, p. 94.
5. Auld, John: New York Med. Jour., Dec. 4, 1909, p. 1142.
6. Wood, E. J.: The Appearance of Pellagra in the United States, THE JOURNAL A. M. A., July 24, 1909, p. 281.
7. Long, J. D.: Pellagra, THE JOURNAL A. M. A., Aug. 27, 1910, p. 734.
8. Raubitschek, Hugo: Pathogenese der Pellagra, Wien. klin. Wchnschr., June 30, 1910, p. 963.

lagra. A moderate degree of secondary anemia is almost a constant finding in the blood of pellagrins, and leukocytosis is not found unless there is secondary infection, as shown by the reports of Lavinder[9] and others. Fox[10] has found that the Wassermann reaction is not of value in the diagnosis of pellagra. Cole and Winthrop[11] have reported cases of transfusion of blood of supposedly cured pellagrins into patients with active manifestations with apparently good results.

Nothing typical has been found in the examination of the urine of pellagrins. In regard to fecal examination, Nichols[12] in the examination of the stools of eighty-eight patients found amebas in 37.5 per cent., while in 101 control cases they were present in only 11.8 per cent. There were 85.3 per cent. of cases with protozoa, while in the control cases there were 48.6 per cent. None of the fecal findings have been of positive value either as to the diagnosis or etiology. Hookworm disease, although having in the United States very much the same geographic distribution as pellagra, is in no way associated with pellagra. Pellagra patients may also have hookworm, but this is simply a coincidence.

The eye symptoms of pellagra have not been at all constant. Welton[13] examined the eyes of fifty-five patients and reached the following conclusion: "In none of the cases presenting eye symptoms could the character of the eye changes be regarded as pathognomonic of pellagra." Other observations are in accordance with this statement.

There is no variation in the temperature of uncomplicated cases of pellagra except during the late stages, when there may be an elevation. It is at least probable that this elevation may be accounted for by mental excitement or secondary infection in many cases.

PATHOLOGY AND DIAGNOSIS

The pathology of pellagra has not been put on a very definite basis and those interested are referred to the very interesting review of the subject by Harris of Georgia.[14] In reference to the pathology of the nervous system, he states that there may be noted degenerative changes in the chromophilic cells of the cortex of the cerebrum. In the cerebellum the cells of Purkinje undergo degeneration, which may account for the ataxia observed in some cases. In the cord cell-degeneration is noted and at times this goes on to cell-destruction. We have no positive evidence of alterations in the peripheral nerves.

The diagnosis of pellagra is easy in most cases if this disease is borne in mind. A positive diagnosis should not be made unless gastro-intestinal and typical cutaneous symptoms are present. *Pellagra sine pellagra* is an impossible diagnosis because in many cases of mental disorders there are gastro-intestinal disturbances. Noticeable nervous and mental symptoms may not appear until late and the disease may occasionally be diagnosed before their appearance. Conditions which may really be confused with pellagra are syphilis, in certain of its forms, and insanity with gastro-intestinal disturbances in which true sun-burn has occurred. I saw a patient with syphilis at the City Hospital, Richmond, presenting the symptoms of stomatitis, diarrhea, erythema, and nervous and mental disturbances, and diagnosed the case as syphilis because the eruption occurred on the palms as well as the extensor surface of the hands. On investigation the history of syphilis was elicited and the lesions and other symptoms disappeared in a short time under the mixed treatment.

There are some conditions which more or less resemble pellagra, the most prominent of which are leprosy, alcoholic polyneuritis and beriberi. In leprosy the skin lesions of certain forms constitute the most marked resemblance to pellagra. In alcoholic polyneuritis there may be gastro-intestinal, nervous and mental and cutaneous disturbances, but there is no seasonal remission and the skin lesions are those of neuritis and are not similar to pellagra.

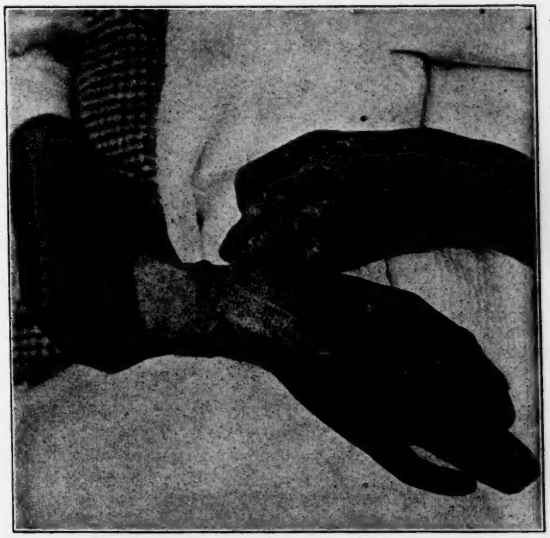

Fig. 2.—Lesions of the hands in a case of pellagra. (Courtesy of Dr. Paul N. Anderson, Morganton, N. C.)

ANALYSIS OF CASES

Having thus discussed the disease in general I shall now proceed with the analysis of fifty-five non-institutional or sporadic cases. A form containing over one hundred questions was used by me in obtaining these histories and this form was sent to physicians who were known to have patients with pellagra under their charge. Many of these patients were also seen by me. Thanks are due to Dr. Ennion G. Williams, chief health officer of Virginia, for the distribution of many of these forms, and I am especially grateful to the physicians who so cheerfully and carefully answered these questions. In this report all doubtful cases have been excluded and many control questions asked in order to take every possible precaution against error. It is to be regretted that complete laboratory studies were not made of more cases, but these cases occurred, for the most part, in rural districts where facilities were lacking and the cases often infrequently visited. This study was undertaken with the idea in mind that the analysis of cases occurring outside of institutions might be of especial value because the earlier symptoms, and at times, the onset of the disease, could be noted, and because light might be thrown

9. Lavinder, C. H.: Tr. Nat. Conference on Pellagra, Columbia, S. C., Nov. 3-4, 1909, p. 33.
10. Fox, Howard: Tr. Nat. Conference on Pellagra, Columbia, S. C., Nov. 3-4, 1909, p. 33.
11. Cole, H. P., and Winthrop, G. J.: Pellagra: Transfusion in Eleven Cases, THE JOURNAL A. M. A., April 22, 1910, p. 1354.
12. Nichols, Henry J.: Tr. Nat. Conference on Pellagra, Columbia, S. C., Nov. 3-4, 1909, p. 60
13. Welton, C. B.: Eye Symptoms of Pellagra: Preliminary Report of Examination of Eyes of Fifty-Five Patients, THE JOURNAL A. M. A., Nov. 13, 1909, p. 1636.
14. Harris, H. F.: Tr. Nat. Conference on Pellagra, Columbia, S. C., Nov. 3-4, 1909, p. 86.

on the epidemiology, the priority of certain sets of symptoms and because of the probability of a more intelligent history from patients who were not inmates of an institution for the insane.

GENERAL HISTORY

Age.—In fifty-four of the fifty-five cases the age of the patient was given, the oldest being 76 and the youngest 6. The average age was nearly 37. The most frequent decade for the occurrence of the disease was between thirty and forty years, sixteen out of the fifty-four cases occurring in this decade.

Sex.—Thirty-nine patients were female and sixteen male.

Nationality.—Forty-two patients were stated to be white American, three others white, American or foreign birth not stated, and one white born in Ireland. Only nine of the patients were negroes.

Married or Single.—Thirty-seven of the patients were married, four widowed and fourteen single.

Epidemicity.—In ten instances there were other cases in the immediate neighborhood, in one instance the second patient was a sister of the first. The cases as a rule were widely separated geographically. In the state of Virginia, in forty-five consecutive cases, pellagra occurred in one county only in nineteen cases, two cases in a county in eight instances, three in two instances and four in one instance.

Fig. 3.—Lesions on the back of the hands and neck in a case of pellagra in a negro. (Courtesy of Dr. William F. Drewry, Petersburg, Va.)

Month of Onset.—Forty of the fifty-five patients stated the month of the onset of symptoms, four simply stated that the disease began in the summer, four others that it began in the spring and in two cases no date was given. In the forty-five cases in which the month was given two began in January, two in February, ten in March, nine in April, seven in May, nine in June, four in August, one in October, one in November, and none in July, September and December.

Priority of Symptoms.—Diarrhea was the first symptom in thirty-five cases, stomatitis in one and diarrhea and vomiting in one, making thirty-seven cases in which gastro-intestinal symptoms occurred first. Gastro-intestinal and skin lesions are stated to have begun simultaneously in seven cases. Cutaneous symptoms began first in ten cases, and in two cases it was unknown which was the first set of symptoms. In three cases the nervous and mental symptoms were stated to have been the first to appear, but on investigation these people were found to have been neurotic for many years. Where exact dates could be ascertained it was found in thirty-five cases that the gastro-intestinal symptoms preceded the cutaneous from one day to seven years; in twenty-seven of these cases three months or less, and in eight one month or less. In seven cases the cutaneous preceded the gastro-intestinal symptoms from two weeks to twenty-eight months; in six of the seven cases one month or less.

Hygienic Condition.—The hygienic condition was said to be poor in fifteen, fair in sixteen, good in twenty-one and excellent in three.

Ingestion of Maize.—Maize products were eaten regularly and formed the chief article of diet in twenty-nine cases, were eaten moderately in thirteen, very rarely in nine and in four cases it was stated that the patients never ate corn products in any form. It might be said that in one form or another maize is the staple article of food throughout this section. Eight of the patients drank corn whisky and four of these to excess. Of the thirteen patients who very rarely or never ate corn products only one drank corn whisky at all. Bread, batter bread, cakes and hominy were the most frequent forms in which corn was eaten. Forty-five answered the question as to whether corn syrup was used and if so whether it was fermented. It was used in eighteen of the cases and was said to be fermented in three. Of the eighteen patients who used corn syrup two of them rarely ate maize products in the other forms and one did not take corn in any other form. In the three cases in which the corn syrup was known to be fermented the patients ate maize products in other forms to excess.

Condition of Corn-Meal.—In twenty-two cases the meal was said to be good, in twenty-two it was unknown whether it was good or not, and in six it was known to be bad or spoiled. Some of the patients used store or shipped meal exclusively and others home meal exclusively.

Pernicious Habits.—One patient was addicted to opium, one to opium and tobacco, five used tobacco alone to excess, three used tobacco and whisky to excess, and five whisky alone to excess. This gives a total of fifteen patients whose constitutions may have been affected by these habits.

Constitutional Diseases.—Twenty patients had constitutional diseases in the past, nine had rheumatism, five malaria, two had syphilis alone, one syphilis and malaria, one malaria and rheumatism, one was paralyzed and one had tuberculosis. None of the patients had hookworm disease.

CUTANEOUS SYMPTOMS

All the patients had cutaneous symptoms.

Distribution of Skin Lesions at the Beginning.—In forty-four of the fifty-five patients the skin lesions began on the back of the hands and forearms alone, in forty-three of these cases simultaneously on both hands or forearms, and in one it began first on the right hand followed in a few days by involvement of the left hand. In seven patients the lesion began on the back of the hands, forehead and alæ of the nose and in three on the back of the hands and dorsum of the feet and in one on the back of the hands and neck. In all of the cases, or 100 per cent., the back of the hands and forearms were affected at the beginning.

Extent of the Cutaneous Lesions.—In twenty-eight of fifty patients who answered, the cutaneous lesions remained confined to the hands and forearms; in four cases the hands and feet were involved; in four hands, face and neck and in twelve hands, face, feet and neck. Two patients stated that the eruption was "all over the body," but in one of these the case was complicated with impetigo which seemed to be responsible for this involvement.

Character of Skin Lesions.—The epidermis was red and more or less rough in the beginning in practically all of the cases but turned dark in twenty-seven cases. In a few cases there was swelling and thickening of the skin and fissuring. Desquamation took place in fifty-one cases out of the fifty-five. The time of the appearance of desquamation varied from two weeks to six months after the appearance of the skin lesions, the average time being one month. Sloughing occurred in fifteen of the cases in from one to six months. In eighteen cases there was bullous formation. The lesions were stated to resemble eczema at the beginning in twenty-one cases, sunburn in twelve, erythema in three, dermatitis in two and syphilis, ring-worm, impetigo and poison-ivy in one case each.

After the lesions healed the appearance of the surface was noted in nine cases. It was glistening and usually reddish, in one case pale and in two dark or brownish in color.

Secondary infection occurred in seven of the fifty-five cases, furuncles in three instances, impetigo in one and ulceration in two; in one the character was not stated.

Remission in the skin lesions occurred in twenty-nine cases.

Exposure to the Sun.—The patients were exposed to the sun in thirty instances and in twenty-one cases this exposure was known to make the skin lesions worse.

MUCOUS MEMBRANE INVOLVEMENT

Stomatitis was present in forty-seven of the fifty-five cases. In seven cases other mucous membranes were involved, usually the anus or vagina.

GASTRO-INTESTINAL SYMPTOMS

These symptoms occurred in every case but one; vomiting in thirty-four cases, diarrhea in fifty-four cases, obstinate constipation in one case and diarrhea alternated with constipation in thirty of the cases.

Remissions occurred in the diarrhea in thirty-six cases. In some cases the remissions were very short.

Forty-three patients mentioned the macroscopic appearance of the stools, which varied from light gray to dark brown or green in color. In most instances they were watery. Mucus was noted in five and blood in one. (For examination of the stools see laboratory findings further on.)

NERVOUS AND MENTAL SYMPTOMS

Fifty-four of the fifty-five patients had nervous and mental symptoms. The onset of these was from a few days to a year and a half after the first appearance of the disease, the average time being six to eight weeks. In several patients who had been nervous for years it was noticed that the nervousness was made worse by pellagra.

Emotional Manifestations.—The temper was stated to be bad in twenty-eight cases, the patients were depressed in forty-four, and cried to excess in thirty-three. In twenty-one cases the patients were stated to have ceased laughing since the onset of the disease.

Memory was affected in forty-two cases.

Hallucinations and Delusions.—These were noted in seventeen cases, in five cases delusions alone, in four cases hallucinations alone and eight cases both. In the delusion cases all were of persecutory character but one. This patient had pleasant delusions. The hallucinations were the usual ones of sight and sound.

Homicide and Suicide.—None of the patients committed homicide or suicide; one patient attempted both, and five threatened suicide.

Nervous Symptoms.—Forty-nine patients were said to be nervous, forty-three restless and forty-six had insomnia.

Paralysis.—Four patients were paralyzed. One of these had hemiplegia, one paralysis of the sphincter ani and two partial paralysis of the lower extremities.

Tremor.—In twenty-eight cases tremor was noted, tremor of the hands in eight cases, of the tongue in two, of the hands and tongue in five, of the hands and lips in two, of the hands, face and tongue in one, of the body one, and nine patients did not state where the tremor was observed.

Trophic Disturbances.—In only five cases were trophic disturbances noted, unless we include skin lesions, and these consisted of thickening and roughening of the nails.

Station.—The station with the eyes closed was unsteady in twenty cases, normal in twenty and untested in fifteen.

Gait.—The gait was abnormal in twenty-four cases, variously described as slow, ataxic, weak or staggering. It was normal in twenty cases and unobserved in eleven.

Knee-Jerks.—In forty cases the knee-jerks were present, they were absent in six and untested in nine. In twenty of the forty cases the knee-jerks were exaggerated on both sides, in one exaggerated on the right and normal on the left, in four diminished and in fifteen they were normal.

Anesthesia.—Areas of cutaneous anesthesia were observed in twelve cases, in two of which they were only noted over the lesion. There was no anesthesia found in thirty cases and it was untested in thirteen.

Cramps.—Twenty-eight patients suffered with cramps in various places. Nine had cramps in the abdomen, legs and abdomen one, abdomen and arms one, legs six, back and legs one, legs and hands one, hands one, in the sides one, cramps general, three, and location of cramp unstated in four. In twenty-four cases no cramps occurred and in three cases it was unknown whether or not they had cramps.

Muscular Wasting and Weakness.—Muscular wasting was present in thirty-five cases, not present in seventeen and unobserved in three. Muscular weakness was present in forty-nine cases, not present in four and unstated in two.

Contraction of the Hands and Limbs.—In four cases there was contraction of the thumb across the palm, in one there was contraction of the index finger and in fifty there was no contraction of the hands. The extremities were said to be contracted a few days in one case, permanently contracted in one case, in two cases the question was unanswered and in fifty-one cases there was no contraction.

Tenderness over the Spine.—The spine was tender in nine cases, not tender in thirty-four and untested in twelve.

EYES

Size of Pupils.—Pupils were normal in twenty-eight cases, contracted in eleven, dilated in nine, right dilated and left normal in one, and untested in six.

Reaction.—In forty-three cases the pupils reacted normally to light, in six the reaction was untested, in five there was no reaction to light and in one the pupils were sluggish.

Exophthalmos.—Only one patient showed exophthalmos and that was said to be congenital.

Cataract.—Three of forty-five patients had cataract. (Also see sight under special senses.)

SPECIAL SENSES AND FUNCTIONS

Sight.—Change of sight was noted in eight cases; in one of these there was diplopia, in one photophobia and in the others simply diminished vision. In forty-one cases there was no change in sight and in six the condition of the sight was not noted.

Taste.—In twenty-one cases taste was diminished; it was "coppery" in one; there was no change in twenty-four and the matter was unobserved in nine cases.

Touch.—Patients noticed change in sensation when they touched objects in fourteen of the cases, sensation being diminished in thirteen and increased in one. Touch was normal in thirty and unobserved in eleven.

Smell.—Sense of smell was diminished in six cases, normal in thirty-eight and untested in eleven.

Hearing.—Hearing was diminished in five cases, normal in forty-one and untested in nine.

Sexual Power.—This was lost in five cases, diminished in one, normal in seventeen and the question unanswered in thirty-two.

Speech.—Difficulty of speech was noted in twenty-two cases, three of which resembled mutism; in four cases the speech was weak and in the rest the speech defect was not described. In thirty-three cases there was no speech difficulty.

GENERAL SYMPTOMS

Malaise.—Forty-nine patients suffered from malaise, in four there was no malaise and two cases did not answer.

Vertigo.—Thirty-six patients had vertigo, thirteen no vertigo and six did not answer.

Headache.—Thirty-five patients had headaches, but in most of these it was noted that the headache was slight or occasional.

Pain.—In thirty-four cases pain was noted; in seven of these cases pain in the back, eight pain in the abdomen, one back and abdomen, one extremities and abdomen, seven in the extremities, one pain all over, one pain in the side and one in the mouth. In the rest the location was not stated.

Pulse.—Pulse was normal in twenty-seven cases, rapid in seventeen and slow in one. The highest pulse-rate was 142 and the lowest 65. The question regarding pulse was unanswered in ten.

Temperature.—The temperature was normal in twenty-one cases, elevated in twenty-five, subnormal in four and unstated in five. In one case toward the end, the temperature was 106 F., but usually it was very slightly elevated and only elevated in severe cases.

Salivation.—An increase of saliva was noted in twenty-eight cases, the question unanswered in two cases and in twenty-five cases saliva was not increased.

Thirst.—Excessive thirst was noted in eighteen cases, diminished thirst in four; the question was unanswered in three; and thirst was normal in thirty.

Anemia of Mucous Membranes.—This was noted in forty-two cases, the question was unanswered in six; and in seven cases no anemia of the mucous membranes was observed.

Hair.—The hair over the body was normally grown in forty-one cases, scantily grown in eight, and two cases occurred in children in which the hair on the body had not developed. The question was unanswered in four cases.

Weight.—Fifty-two of the patients lost weight, in two mild cases the patient did not lose weight and in one case the question was unanswered. The loss of weight from the time of the appearance of the disease varied from 5 to 75 pounds.

Perspiration.—This was diminished in thirty-two cases, increased in three cases, normal in fourteen cases; and the question was unanswered in six cases.

ORGANIC DISEASES

Heart Disease.—The heart was examined and found normal in fifty-three cases and two patients had heart trouble.

Lung Disease.—The lungs were normal in fifty-one cases, in two examination was not made, in one tuberculosis was present and one case was suspicious of tuberculosis.

Genito-Urinary Disease.—In forty-five cases there was no history of genito-urinary disease; four patients had had gonorrhea in the past; one had had syphilis; in one case retention of urine was present, in one cystitis and in three cases the question was not answered.

LABORATORY FINDINGS

Urine.—The urine was not tested in twenty-seven cases, tested and found normal in twenty cases. In eight cases the urine was abnormal as follows: In one case specific gravity was 1,032 and indican increased, in one a trace of albumin, in one specific gravity was 1,040 and abundant phosphates, in one pus-cells, in one a moderate quantity of albumin, in one indican increased, in one indican increased and specific gravity was 1,031. Other than as mentioned the urinary examinations were negative.

Feces.—The feces were not examined in forty-seven cases and the stools were examined and found negative for parasites in eight cases.

Blood.—Partial or complete blood-examinations were made in eight cases. The hemoglobin was tested in five of these cases and ranged from 65 per cent. to 95 per cent. The red cells were counted in these five cases and ranged from 2,750,000 to 4,952,000. Three of these patients showed secondary anemia, one showed no anemia at all and in one case the hemoglobin was 70 per cent. and the red cells 2,750,000 giving a minus color-index, indicative of essential rather than a secondary anemia. This case gave only the usual clinical manifestations. The white cells were within normal limits in the four cases in which they were counted. The polynuclears were practically normal in the six cases counted, ranging from 68 per cent. to 80 per cent.; the lymphocytes and large mononuclears were normal in the six cases and the eosinophils were increased in one case only. All of the blood-examinations were negative for malaria.

Gastric Contents.—Gastric analysis made in one case showed nothing abnormal.

REMISSIONS AND MORTALITY

Of the fifty-five patients, eight are in their first year of the disease and alive, twelve died the first year of the disease, twenty-eight had remissions, three continued over a year without remission and it is unknown in four cases whether remissions occurred or not. Of the twenty-eight patients who had remissions sixteen have had only one each and the rest have had from two to five each. All the remissions were in the winter, but one patient had one remission in the fall and another in the late winter and one patient had three remissions, all of which were stated to have been in the summer. Most of the twelve patients who died the first year of the disease, died within the first six months. One died in five weeks.

TREATMENT

These patients were given various treatments, arsenic being the most popular. Some patients died while taking the arsenic and others had remissions. It is impossible to say whether the remissions occurred because of, or in spite of, treatment. Various local applications were applied to the cutaneous lesions but without beneficial results. Bismuth, opium, etc., were given for the diarrhea but in many cases it persisted while these remedies were being taken. In five cases I gave or suggested hexamethylenamin, with apparently very striking results. After three or four days the gastro-intestinal, cutaneous and nervous and mental symptoms began to clear up and the patients shortly went into a state of remission.

CONCLUSIONS

From these statistics the following are some of the conclusions which may be reached:

1. Pellagra may occur at any age from childhood to old age.
2. In the Southern states, although the negro forms the majority of the lower class, yet pellagra is most common in the white.
3. The disease, while affecting chiefly the lower classes, is occasionally seen among those of good hygienic and social surroundings.
4. The disease is widely spread and did not occur in local epidemics.
5. The disease in the cases reported is more common in rural districts than in the cities.
6. The majority of cases occurred in the spring and early summer.
7. The gastro-intestinal symptoms, especially the diarrhea, are usually the first manifestations of the disease.
8. The ingestion of maize or maize products, whether spoiled or not, is not alone the cause of pellagra.
9. Patients whose constitutions are depleted by pernicious habits or chronic diseases are not rendered thereby more susceptible to pellagra than those not so affected.
10. The backs of the hands are always affected in the cutaneous lesions of pellagra and the lesions are always symmetrical.
11. Exposure to the sun cannot account for the cutaneous lesions.
12. Stomatitis is almost a constant symptom.
13. The nervous and mental symptoms conform to no known nervous disease or form of insanity.
14. The nervous and mental symptoms form no distinct clinical entity.
15. The eye symptoms are not pathognomonic.
16. Emaciation is practically constant.
17. The special senses are only occasionally affected.
18. Pellagra is not *per se* a febrile disease, and when an elevation of temperature occurs it may frequently be accounted for by a complication.
19. A moderate anemia is found in most of the cases.

20. The heart, lungs and genito-urinary organs do not seem to be particularly affected by pellagra.

21. Examinations of the urine, feces and blood show nothing pathognomonic of pellagra.

22. The cause of pellagra is unknown and the study of these cases throws no positive light on the etiology. Patients may have pellagra who do not eat corn products. Sunlight does not account for the condition. In these cases no parasite, toxin, bacteria nor insect has been isolated as being the causative factor.

23. The disease is not communicable by ordinary contact.

24. Three great systems are affected: the digestive tract, the cutaneous surface and the cerebrospinal and peripheral nervous systems and their involvement seems to be in the order, named.

25. Remissions occur in over half of the cases.

26. Death frequently occurs in the first attack.

27. It is too early in the study of the disease in this country to estimate the mortality. Probably 50 per cent. die during the first two years.

28. In these cases it cannot be said that any patient is more than apparently cured as it may simply be a remission.

29. No specific cure for the disease has been found, and the remedies in general use are of doubtful value. Hexamethylenamin may possibly have curative properties.

SOME STATISTICS OF OTHER CASES

Return postals were sent to various institutions in which pellagra was thought to exist. Replies were received reporting 598 cases. The question was asked, "How many of your patients are known to have died of pellagra?" It was found that 226 of the 598 patients had died, leaving 372 living or unaccounted for.

Another question asked was, "How many living patients failed to show symptoms the following year?" Replies indicated that there were 157 which showed no symptoms to Aug. 1, 1910.

A third question was in regard to the best remedial agencies. Iron and arsenic, especially atoxyl, were used in most of the cases. The administration of these preparations, however, was not followed by brilliant results.

REMARKS

The cause of pellagra remains a mystery; the prognosis is grave, and as yet treatment is inadequate. The disease is one of problematic interest to the hygienist, the internist, the dermatologist, the neurologist and the alienist. We can not believe that a disease so serious and with such striking characteristics can have existed in the United States for more than a few years without recognition. It therefore behooves us to investigate all theories as to its cause from an impartial standpoint, until the cause is absolutely proved, and to adopt as far as practicable such suggestions for its treatment as may seem reasonable. In regard to the latter, it would be advisable to send pellagra patients to the far north before spring sets in and see if the colder climate would prevent recurrences. Several patients have told me that in the winter remission they felt ill on warm days, and one stated that the back of the hands would redden temporarily on these days. We might also try protecting exposed parts with gloves and veils.

The hexamethylenamin treatment was tried by me because of its property of forming formaldehyd in the body secretions and because of the probability of pellagra being an infectious disease, the exact character of which is unknown. Hexamethylenamin was given to five patients in doses of from 5 to 7.5 grains four times a day over a period of about three weeks, and all other treatment discontinued. Two of the cases were so severe that it looked as if death would be the only outcome while the other three cases were of moderate severity. Such prompt and striking improvement followed the administration of hexamethylenamin that although the number of cases in which it was used is very small I feel that it deserves a more extensive trial.

208 East Franklin Street.

DISCUSSION ON PELLAGRA

At the St. Louis Session of the American Medical Association, June, 1910, the Section on Dermatology devoted Wednesday and Thursday mornings to the presentation of cases of pellagra and the discussion of that disease.

WEDNESDAY MORNING SESSION

DR. R. P. PRICE, Nevada, Mo.: I take pleasure in presenting two patients, both inmates of State Hospital No. 3, Nevada, Mo. They were treated for some time before we were aware of the character of the disease. The first case began with malaise and loss of appetite, followed in a short time by diarrhea and stomatitis and inflammation of the backs of the hands; there was also a small girdle extending around the wrists. These symptoms were treated symptomatically with little avail. I put the patients on iron, quinin and strychnin, Fowler's solution, with fruits and lemonades every two hours. This seemed to clear up the symptoms for a while; however, they returned in two or three weeks. The second patient has been in the hospital a little more than a month. The only symptom on admission was an inflammation on the backs of the hands. The diagnosis of her mental condition was maniac depressive insanity. She has run a subnormal temperature throughout the entire course. At this time she has developed diarrhea and stomatitis. I have two other cases at the hospital which developed in the same wards that these patients were in.

DR. A. RAVOGLI, Cincinnati: Pellagra is most commonly observed in Italy among the poorer classes and has been called a disease of poverty. It is supposed to be due to the fact that during certain seasons of the year these people are compelled to subsist on decayed or unripe maize which takes a greenish appearance. This, in many families, forms the staple article of food during the winter months. Under the microscope, this unripe green maize shows a peculiar fungus which has been called *Sporisorium maydis*, and it is to this that the occurrence of pellagra has been attributed. These patients after a time take an aversion to this article of food, and complain of burning of the throat. This is followed by gastric and intestinal symptoms, usually diarrhea. This constitutes, practically, the first stage of the disease. Afterward, there is an erythema of a deep, brownish color, affecting the backs of the hands and the forehead and neck—usually the parts exposed to the sun. The eruption becomes scaly in character and disappears in the cold weather, leaving atrophic scars. This skin manifestation is characteristic of the disease. These patients usually improve during the summer, when the quality of their food is better. In the more advanced cases the mental faculties begin to fail, and many of these patients commit suicide, usually by drowning. Others die of some complication or from the intestinal symptoms, colliquative diarrhea. The prognosis of the disease in the early stage is not so bad, and I have seen many patients improve under better hygienic surroundings and tonic treatment. In the later stages, the prognosis is absolutely bad and only death can relieve the patients from their miserable condition.

DR. JAMES W. BABCOCK, Columbia, S. C.: We are all inclined to regard pellagra as a new disease in this country.

As a matter of fact, it was reported in the United States as far back as 1864, and since then it has been observed in many institutions. Cases have now been reported from 28 states. It is prevalent in some of the asylums in California, and recently a number of cases have been found among the inmates of Blockley Hospital, Philadelphia. To-day, pellagra in this country presents a very momentous question. As to the etiology of the disease, I do not think that Americans are quite prepared to accept the maize origin of the disorder. The theory that it is due to a specific infection by a parasite has been advanced notably by Sambon of London and the strong resemblance that has been noted between this disease and sleeping sickness is suggestive that it is communicated by a gnat or sand-fly. One of the striking features of the American type of pellagra is its high mortality. In Alabama, in one asylum, the mortality was 68 per cent. In one of the public institutions in Columbia, South Carolina, out of 605 admissions, 92 had pellagra, a percentage of 15. Another interesting feature is the variety of mental symptoms shown by these patients. They are usually described as those of melancholia, although they may manifest themselves in many forms, from simple neurasthenia to manic-depressive insanity, and may even simulate general paresis of the insane. It has been truly said that when we know what pellagra is, we may have a much better understanding of insanity itself.

DR. WILLIAM T. CORLETT, Cleveland: The cases of pellagra that I have seen in this country have been of a severe type; much more severe than I have seen in other countries. Most patients here find their way into asylums, while in some foreign countries, notably the West Indies and Egypt, one sees more cases outside of institutions—in short, there the affection seems less severe. In this regard it may correspond to many other diseases which at first, when new in a country, manifest themselves in a more severe type. As to the distribution of the disease in this country, in Ohio we have had one case of pellagra, so far as is known, and in the clinics of the large American cities, men who are familiar with the disease have not reported it, except in one or two instances. This shows that pellagra in America is mainly confined to certain localities. In the recognition of the disease, we must remember that pellagra is a constitutional disorder, and that one cannot with safety make a diagnosis from one symptom alone.

Many cases of pellagra, even those shown here, although in one the skin lesions are typical, could scarcely be recognized from the cutaneous lesions alone. Other skin eruptions, such as simple erythema, inflammation, or eczema, may resemble the skin lesions of pellagra so closely that even the most skilled are liable to be mistaken. In the first case shown to-day, the condition of the mucous membranes is also typical, but the simple pigmentation of the skin is not sufficient to rest a diagnosis on, because it may be due to various causes. I have a colored photograph of a case of eczema which might well be mistaken for pellagra, but in my case we have only cutaneous symptoms.

Dr. Ravogli has stated that the poorer classes in Italy subsist largely during certain seasons of the year on damaged corn, and this has long since been advanced as the chief etiologic factor of pellagra. In this country, however, so far as we can trace, the disease is not limited to communities where corn is freely used as an article of diet. We have no positive proof thus far that Indian corn is responsible for the disease in this country. It may be that the use of corn in large quantities predisposes to the disease, but we are not in a position to condemn Indian corn as the sole etiologic factor of pellagra.

DR. JAMES W. BABCOCK, Columbia, S. C.: Pellagra in this country is by no means confined to institutions, nor is it limited to the poorer classes. A number of cases have been reported among well-to-do people. The disease, so far as we know, is not communicable in the ordinary sense of that word, although there are instances in which several members of the same household were affected. There is no doubt that there is an extraordinary relationship between pellagra and insanity. Preexisting insanity is apparently a predisposing factor. The skin lesions of pellagra are not confined to the exposed surface, and many of these patients have lesions about the thighs, vulva, and anus. Cases have been reported in which women who have been operated on for relief of neurasthenic conditions have immediately afterwards developed the lesions of pellagra. There is still a great deal of mystery about this disease. We have just learned enough about it to warn us not to be too dogmatic in our assertions regarding it. I have seen a few cases in which there was glandular enlargement; in a case which I saw recently the parotid was enlarged before the appearance of the dermatitis. It is claimed that the disease is always associated with neurotic symptoms, although these may not be pronounced. As to the time of its occurrence, there is no age limit: I have seen it in a child in arms and in very old people.

DR. J. M. KING, Nashville: We do not know how pellagra is transmitted, nor whether the germ is a fungus or a protozoon. With reference to communicability we have had some very interesting cases in the south. In one institution, a Baptist orphanage, 17 cases have developed, the disease being introduced by a child 3 years old. That child was a member of a family of four, and all four later developed the disease. Following this, 12 or 13 other children in the institution became similarly affected. Whether the mode of transmission is by a fly or some other insect or through the food, we do not know. In the country, several miles from Nashville, a woman developed the disease, and shortly afterward her husband became similarly affected. In another case, the disease was apparently transmitted by the washing of clothes and I have heard of several instances in which the disease affected two persons who were intimately associated. In the family of a Methodist minister the wife and daughter contracted the disease in rapid succession. I have seen the disease among the very best classes—white people in the better walks of life. In treatment, for the stomatitis I have found that a solution of silver nitrate, from 10 to 15 grains in glycerin and water, together with applications of peroxid of hydrogen, gave the best results, and internally I give a tonic mixture of iron, quinin and strychnin. This treatment should, of course, be combined with good food and a hygienic environment.

Of the 17 cases that developed in the Baptist orphanage, 2 patients have died, and one is now in the terminal stages of the disease. The others are at least temporarily free from the disease. From the observation of our cases and the postmortem findings, we have come to the conclusion that this is primarily a disease of the alimentary tract. The skin becomes so susceptible to the rays of the sun that an erythema is produced. I recently saw one patient who had the disease for 2 years, and in whom the skin manifestations did not appear until a week or so before death. It is unquestionably a constitutional disorder, and probably of gastro-intestinal origin. The diagnosis rests on the skin lesions and the patient's mental condition.

DR. JOHN D. LONG, Washington, D. C.: During the past few months, I have been making some studies and observations of pellagra in South Carolina, and have been particularly interested in the microscopic findings in the stools of pellagrins, namely, muscle fibers, starch, crystals of various kinds, fats, oils, mucus, pus, blood, vegetable cells and fibers, and parasites, such as amebas, flagellates, ascaris, uncinaria, trichuris, oxyuris, etc. These findings are of interest in connection with the possible etiology of the disease. I was inclined to believe that the disease was due to some intestinal toxin, and this view was strengthened by the fact that in the milder cases, those that were not too far advanced, the mental symptoms were relieved very markedly by free elimination through the intestinal tract. In the more advanced cases the patients who were actually insane did not respond so well to treatment. The result of *x*-ray findings in these cases showed the presence of a number of spinal deposits, with pressure on certain spinal nerves and consequent interference with the function of those nerves. The presence of these spinal deposits was verified in one case which we had an opportunity to examine post mortem.

THURSDAY MORNING SESSION

DR. GEORGE A. ZELLER, Superintendent State Hospital, Peoria, Ill.: It is through the courtesy of the Governor and the Board of Administration of the State of Illinois that I am able to show these seven cases of pellagra. In 1908, roundly speaking, about 1,000 cases of pellagra were reported in this country; in 1909, 5,000 were reported, and this year the number seems to be increasing in the same proportion. The disease is characterized by slow but constant extension. It has been known in Italy for over a century and a half, and has been the object of careful study there by Lombroso and others. In the patients brought here this morning, the pigmentation of the skin, especially on the backs of the hands, which is usually very characteristic of the disease, is not very pronounced at this season of the year. While it is not believed that pellagra in this country has existed in the past to the same extent as it does now, still there were probably many cases that went unrecognized, especially in public institutions, and in retrospect now we see that in the insane patients in whom we had to apologize for the condition of the hands and arms we were really dealing with cases of pellagra. The public is gradually waking up to the importance of this disease, and in Great Britain, the king has recently appointed a commission to study the spread of the disease throughout the empire. The Governor of the State of Illinois has also appointed a commission, headed by Dr. Frank Billings. Many who have given this subject their consideration are taking a middle ground between the unconcerned and the alarmists. I represent the latter. I really feel that the situation is alarming. These patients have been brought here for study and instruction. All have been officially declared insane, and they have been in the hospital for varying lengths of time. In these patients, at present, the intestinal symptoms are lacking, but they will come later.

Pellagra (Italian, *pelle*, skin, and *agra*, rough) was first described by Frapolli in 1771. It has also been known as Alpine scurvy and sunstroke of the skin. It has been confused with leprosy, eczema of the hands and other cutaneous affections. Many unsuspected cases have recently been discovered in various public institutions. The U. S. Government, through Captains Siler and Nichols of the War Department and Dr. C. H. Lavinder, of the Public Health and Marine-Hospital Service, is now investigating the subject abroad, and Dr. John D. Long, of the latter service, has been pursuing investigations along similar lines in the South. In a city of 75,000 people, I recently saw a woman who had this disease for 7 years. She had been treated, at various times, by 12 physicians for supposed eczema and other conditions. Finally, she consulted a physician who had seen some of these cases at our institution, and he was able to make a correct diagnosis. She died recently with an undisputed history of the disease dating back 7 years. There are doubtless many similar cases in various cities throughout this country—cases of pellagra that have gone unrecognized, and the disease may be extending gradually, as has been the experience in Italy. Illinois was the fifteenth state in this country to report pellagra, and since then, cases have been reported from ten additional states. There has been some talk of a national congress for the study of pellagra this summer, but I question whether this would be an opportune time for such a meeting. I think it would be better to wait until the men who are studying the disease abroad are prepared to give us the results of their investigations, and in the meantime those men who have the opportunity should take up this work as a special study and learn what they can in regard to this mysterious malady.

As to the treatment of pellagra, we have had the best results with arsenic. On the theory that the causative factor of the disease was intestinal and due to the presence of a parasite or ameba, it has beeen suggested that the bowels be flushed through an appendicostomy wound, but so far nothing has been done along that line.

DR. JAMES W. BABCOCK, Columbia, S. C.: Dr. Zeller and I can tell you frankly that anyone who shows special interest in pellagra, or who tries to direct the attention of the medical profession to this important subject, is going to be criticized not only by the laity, but by our own profession as well. In the South Carolina asylum there were last year 605 admissions, and of these, 92 patients had pellagra, and because I have attempted to call attention to the importance of this subject, a brother physician, a fellow member of the South Carolina State Medical Society—who happened to be also a member of the state legislature, announced before that body that "Babcock is crazy on pellagra."

The subject of pellagra is a momentous one, particularly to the alienist. Two and a half years ago it was generally unrecognized in the United States. We are frequently told that it is a new disease, but when we look back to the musty records of the past, we find that two cases were reported by asylum physicians as far back as 1864; one by Dr. Tyler, of Somerville, Mass., and one by Dr. John P. Gray, of Utica, N. Y. Dr. W. J. W. Kerr, now of Corsicana, Texas, who was assistant physician of the Andersonville Prison during the Civil War, is satisfied that one of the causes of the mortality in that institution was due to pellagra. In 1883 a case was put on record by Dr. Samuel Sherwell of Brooklyn, N. Y. Subsequent to that, other cases were reported again by Dr. Sherwell and by Dr. Harris of Georgia. The first epidemic was reported by Dr. George H. Searcy, of Alabama, in 1907, who discovered a number of cases in the state insane asylum for negroes at Mt. Vernon, and in the same year I independently reported the presence of pellagra cases in the South Carolina Hospital for the Insane. Since then, patients suffering from this disease have been found in many other asylums, and to-day we have records of pellagra cases in 28 states, including California, where the disease is believed to have existed in one institution for the past 7 years. I have no doubt that there are at least 5,000 cases of pellagra scattered throughout this country, from the Atlantic to the Pacific, and from the lakes to the gulf. If I did not know from personal experience what unkind things have been said of physicians who have directed attention to this subject, I should be unwilling to admit that one medical man would raise his voice in criticism of another who is making an effort to emphasize the importance of the situation we are facing to-day. If pellagra has existed in this country for some years why was it not recognized earlier? Simply because the great medical authorities told us that it was an Italian disease. Osler, in the edition of his "Practice of Medicine" prior to the latest, says that pellagra has never been observed in the United States. I know a brother physician who recognized pellagra in the South Carolina penitentiary in the eighties, but abandoned his diagnosis for lack of authority from the medical writers he consulted. Five years ago, at a meeting of the South Carolina State Medical Society, an unmistakable case of pellagra was brought before one of the very best diagnosticians in the United States; he studied the case for an hour and then said the patient had "glossitis." Yet, in the face of all this, we are told that we are crazy about pellagra; but after a physician has seen patients die of this prevalent and loathsome but unrecognized disease. and at last thinks that he has light upon a dark subject, he is bound to raise his voice in warning in regard to this insidious and fatal malady. Let me say in passing that Dr. Walter Wyman, the head of the U. S. Public Health and Marine-Hospital Service, more than anyone else in the United States, deserves our gratitude for the manner in which he has taken hold of the pellagra problem. He was broad-minded enough and strong enough to say, in 1908: "Yes, we will investigate this disease," and he has never taken a backward step, although, like the rest of us, he has doubtless been subjected to criticism for the continued activity he has shown. Captains Siler and Nichols of the U. S. Army have also been very active in the matter.

DR. MARCUS HAASE, Memphis, Tenn.: My experience with pellagra has been limited to 23 cases last year, and 6 cases so far this year. They have all been outside patients—not institutional cases. They either came to the hospital, or else I saw them in consultation outside with their physicians, and they were not cases in which the mental sym-

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toms were pronounced. Of the 23 patients whom I saw in 1909, 5 died. The age of the youngest of my patients was 3 years, and the oldest was 70. I would hesitate to make the diagnosis in these cases from the skin lesions alone: other symptoms are necessary for a diagnosis. As to the causative factor in these cases, the corn theory has not been taken into consideration at all, excepting that cereals have been excluded from the diet of these patients.

DR. TINSLEY BROWNE, Hamilton, Mo.: I wish to report a case of pellagra that occurred in Northwestern Missouri, of about 3 years' standing. It was the first case of the kind I had seen, and I did not know what it was. The patient's hands first broke out with what was supposed to be sunburn. Then he developed an uncontrollable diarrhea and gradually became insane. The eruption on the hands recurred the following year. The man was a dentist, 55 years old, and had been a great user of the corn products.

DR. OLIVER S. ORMBSY, Chicago: The commission appointed by the Governor of the State of Illinois to investigate pellagra is engaged in various ways getting information both clinical and experimental but has nothing to report as yet. During the winter while the disease has been in abeyance, the work has been directed largely toward investigation of the corn and other food products. There is a special hospital at Kankakee where pellagra patients are kept under observation and it is hoped to accomplish something in this study. We all feel greatly indebted to men like Dr. Zeller and Babcock who through their enthusiasm and knowledge have awakened both the official and lay public to the importance of the subject and thereby made such an investigation possible. In regard to the diagnosis of pellagra, some mistakes have of course been made. Cases of eczema and other skin conditions have been erroneously diagnosed as pellagra. When this subject first came up, physicians visited the hospitals and saw these patients, and then went over the records, thinking that perhaps some cases might have escaped notice, but in this respect their experience was different from what it had been in connection with other new diseases. In the early experience, in blastomycosis, for example, we were able to recall unrecognized cases in the past, and the same is true of sporotrichosis, but it was not so of pellagra. We could not find the record of a single case in the past that we felt sure was an example of this disease.

DR. HOWARD FOX, New York: It is perhaps presumptuous for a New York man to discuss pellagra on this occasion as in New York we have seen almost no cases of the disease. The interest which pellagra has excited among physicians in New York was shown at one of our meetings last fall when Dr. Babcock and Dr. Watson read papers on the subject. Reference has already been made to the two cases that have been seen and reported by Dr. Samuel Sherwell of Brooklyn. Dr. C. H. Lavinder has also seen a case at the Marine-Hospital on Staten Island. Another case of pellagra has been seen at Ward's Island and still another recently at Newark, New Jersey. The subject is of particular interest to me from its dermatologic aspect. From the descriptions in the text-books and especially from the excellent volume of Ludwig Merk there is no question in my mind that many of the cases seen in this country are identical with the cases of pellagra abroad.

DR. ISADORE DYER, New Orleans: I had the privilege of studying the cases of pellagra which were investigated by Dr. Searcy during the first outbreak which was noted in this country, and which was, perhaps, the chief cause of inciting interest in this unusual disease. Since then, the city of New Orleans has produced a considerable group of cases of pellagra derived from the neighboring cities and located in the Charity Hospital. Comparatively few cases have occurred in the State of Louisiana proper. There are two insane asylums under the public direction, and in both of these a number of cases have been observed in the past few years. The statement that pellagra exists in this country I wish to endorse as a dermatologist, and say that in my opinion, it is a new disease. The first case I saw was sent to me by a country physician of Alabama who recognized it as pellagra. This was prior to the study of the Mount Vernon cases by Dr. Searcy. I did not concur in the diagnosis of the case sent, regarding the condition as a toxic erythema and treating it as such. This patient ultimately recovered, which strengthened me in my belief that the disease was not pellagra. My later observations of other similar cases led me to change my opinion of this original case, and to accept the diagnosis of the country physician that the case was one of pellagra. In regard to the care of this disorder, my experience has been limited to about 10 cases. I have seen patients in New Orleans in various stages of the disease, largely under the direction of Dr. Bass, who has done a great deal of work in connection with pellagra in Louisiana, and who has observed more cases than any one else in the city.

I am not an alarmist in relation to pellagra; I am a conservative. I believe that this is a disease which may be cured, and I am prompted to make this statement from my own results. In some of my cases, the disease was so far advanced that the patients made their own diagnosis. While there are certain skin diseases which are liable to be confused with pellagra, I differ with those who claim that the skin lesions of this disease are not distinctive and cannot be differentiated from ordinary sunburn. While there are atypical cases which it would be difficult to recognize, there are classical cases in which the skin lesions are characteristic. In my investigation of this disease, which has beeen limited, I have learned to class these cases as belonging to the erythema group, and the internal or other evidences which they present argue in favor of that belief. I consider a persistent erythema limited to the hands, neck and chest as almost as strong a diagrammatic confirmation of pellagra as are the lesions of leprosy or those of tubercular syphilis. In the treatment of all my cases of pellagra I have used quinin hydrobromate, and even in advanced cases, with stomatitis and diarrhea, I have often given 10 grains 3 times daily, and have kept it up until those symptoms have been controlled. The dose can then be reduced. In addition, I have used arsenic, which I believe is of distinct service. None of my patients has died, and some are now free from the symptoms of the disease. I believe that quinin is of great service in the treatment and cure of pellagra.

DR. A. J. VANCE, Harrison, Ark.: Pellagra is described as a disease of Southern Europe, and until recently it has been considered foreign to our list of ills. The first report of the disease was in Spain in 1735, about 40 years after the introduction of Indian corn. Frapolli of Milan was the first to describe the disease and to call it pellagra (in 1771). He declared it had existed since 1578, and since then Italy has been a hotbed for it. In 1884 the mortality was 13 per cent. In 1905 it had been reduced to 4.3 per cent. and in 1907 it had been still further reduced to 0.7 per cent. Marzari was the first to call attention in 1810, to the relationship between the use of corn and pellagra. Vincenzo Setti in 1826, asserted the main cause of pellagra to be a fungous growth on the corn, producing decomposition of the oils in the corn. In 1776, an ordinance was passed in Venice prohibiting the sale of corn having a bad taste or odor. There is nothing to indicate that pellagra is caused by corn *per se*, but by corn not fully matured and which has been stored in damp places and allowed to mold.

With the limited experience of physicians in the United States, the prognosis is considered grave. Statistics are meager and unsatisfactory, based on asylum cases which give a mortality of 67 per cent. of the patients; 10 per cent. become insane and these rarely ever recover. Pellagra is essentially a chronic condition. Pellagrins are said to live from 20 to 30 years. The disease is also liable to recur months after recovery seems to be complete, and death frequently follows the second or third attack. In addition to the eruption on the dorsal surface of fingers and hands which is very much like sunburn, we find diarrhea, sick stomach, stomatitis, and ulcers on mucous surfaces, in mouth, rectum and vagina; later the patient is nervous and probably delirious.

Has Dr. Babcock observed a peculiar odor of the feces so characteristic that a diagnosis can be made? Dr. Cole of

Mobile has been getting good results from the transfusion of blood from cured pellagrins, and even from healthy persons who have never had pellagra. If Dr. Babcock and Dr. Zeller are crazy on the subject of pellagra, we should be thankful for such insanity. This is a serious problem, one which many of us will be required to meet.

DR. JAMES W. BABCOCK, Columbia, S. C.: Physicians are waking up to the fact that pellagra is a big subject, and to the asylum physician it is a different problem from what it is to the dermatologist. To the asylum physician it is a very serious question. We deplore the notoriety the subject has received through the newspapers, and we are willing to admit that there is at present in this country more or less pellagraphobia. Still, it may not after all be entirely unfounded. Dr. J. D. Long recently visited Blockley Hospital in Philadelphia, in consultation with the local staff and among the patients there he recognized 9 cases of pellagra, and 16 suspects. This shows that the disease is gradually being observed north of Mason and Dixon's line. Some French authorities have stated that there were probably only certain classes that were susceptible to this unknown toxin, those who eat maize, alcoholics and the insane. Dr. Vance referred to the peculiar odor of the stools of these patients. There may be some grounds for this belief, and I know nurses who state that such is the case. There is perhaps as much foundation for it as for the belief that smallpox has a peculiar and characteristic odor.

DISCUSSION ON THE SANITARY OUTHOUSE

At the St. Louis Session of the American Medical Association, June, 1910, in the Section on Preventive Medicine and Public Health, Dr. Charles W. Stiles, Washington, D. C., exhibited some models of privies, such as have been illustrated in his article issued by the government.

DR. CHARLES W. STILES, Washington, D. C.: The average privy in the country districts is ventilated between the boards and every other way, is open in the back, and is not over an excavation. From it there is bound to be a spread of the various soil pollution diseases: typhoid fever, amebic dysentery, bacillary dysentery, hookworm disease, etc. It is the exception that I find a privy of a better type than that on the farms. It is my belief that I do not usually find, medically speaking, a better type of privy in the suburbs of cities; although, from the standpoint of construction, the suburbs usually have a much better type. One can readily see how disease can spread from such a structure.

After studying the matter from several points of view, I have prepared a design for a sanitary privy. It must be private, must prevent the spread of disease, and must be cheap. My design can be built, so far as the material is concerned, for from $5 to $10, the cost varying according to the price of material in different localities. It is closed in the back, and underneath is a water-tight pail, tub or barrel. There should be cleats, so that that pail will always center; and it is best to have the top of the pail come snugly up to the seat. By using a fluid disinfectant, or simply water, with a cup of kerosene oil on top of it, the flies can be kept away from the excreta. If a fluid is used, the pail must be deep enough to protect from splashing.

One of the great problems of the outhouse is to make the privy as little disagreeable as possible. One reason why people avoid the privy in hot climates is that it is a disagreeable place. To overcome that point I have put in five ventilators. The door should close of its own accord, with a spring. Most house privies have from two to four seats. I see no advantage in that; and the expense can be reduced by having a single seat. There should be a lid to the seat, so arranged that as soon as a person rises the seat will fall of its own accord. For children, a separate smaller seat can be used, shoved into place according to necessity.

This privy is protected against flies in various ways: first, by the screens, by the automatically closing door and coverlid, by a tight door in the rear and by the use of a fluid disinfectant. The fly protection can be carried one point further by painting the privy dark. Flies are attracted by light colors, mosquitoes by dark colors; but I think the flies are amply guarded against by the ventilation, the fluid in the pail, the screens, the automatically closing doors, and the rear door (for removal of pail) falling down so that it has to be raised.

The Public Health and Marine-Hospital Service issues a reprint giving the carpenter's estimate for the lumber, showing the lumber sawed up into the proper shapes, and giving full instructions from beginning to end, so that any schoolboy of 12 or 14 years of age can construct a sanitary privy for his home. Recently I have induced some of the schools in the South to introduce the sanitary privy as one of the regular objects to be constructed in the manual-training classes. They can just as well build a privy as anything else.

DR. J. N. HURTY, Indianapolis: I hope that the papers of the land will soon—say within the next year or two—commence to appreciate the work of sanitarians. As we know, there are 2,000,000 people in the South rendered inefficient, made burdens on the states in which they live, and all because of a preventable disease. When first pointed out by Dr. Stiles, his first reward was ridicule. I don't know that the papers have ceased ridiculing it yet; I would not be surprised to find that they are still making fun of this great discovery of the cause of so much misery, so much inefficiency, so much sickness and so much shortening of life; but let us hope that they will get hold of the idea presently. This is not a savory or beautiful subject, but it is very important.

DR. CHARLES W. STILES, Washington, D. C. [Replying to questions asked by several members]: As to the destruction of infection by disinfectants, sufficient studies have not yet been made. Any thing which will keep oxygen from the hookworm eggs acts toward destroying them. At the same time, we must recall that in the dry-earth system the night soil is not sufficiently covered with dirt, and we cannot get people to keep them covered. I am coming to the view that a fluid disinfectant, if only water and kerosene oil, is perhaps after all the safest; but that point is still *sub judice*.

As for the final disposition of the night soil, any farmer can put a pail like that on two stones, make a fire under it and thoroughly disinfect the foul material. If two pails are provided instead of one, one pail may be utilized for a week and then be set aside to ferment; this is an additional safeguard against the spread of disease, because fermentation breaks up the fecal material entirely, and the ova are so destroyed.

I recommend a privy raised from the ground to avoid rats. A privy which is built down to the ground all the way around provides a breeding place for rats. This is avoided by the opening under the floor.

Vaccine Therapy in Skin Diseases.—T. C. Gilchrist, in *Journal of Cutaneous Diseases*, states that in the treatment of cutaneous affections vaccine therapy is a distinctly valuable adjunct to our therapeutics. The *Staphylococcus albus* vaccine is of undoubted value in all pustular affections of the skin but especially in treatment of relapsing furunculosis, staphylococcus dermatitis, sycosis vulgaris, in certain forms of eczema, pustular rosacea and in acne when the disease is mostly secondarily infected with the *Staphylococcus albus*. He has also found vaccines of value in erythema multiforme, especially of the relapsing bullous type, and in rosacea, where the flushings were decreased by the vaccine therapy. It was also helpful in dermatitis herpetiformis and pityriasis rosea. He would recommend that vaccine therapy be tried when the disease does not yield to the usual method of treatment. *Bacillus acne* vaccine be found of value in the chronic nodular relapsing types of acne vulgaris, and in his hands, in a great many cases it has proved a curative agent.

THE MAKING OF A SURGEON

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It is a good principle in life, no doubt, for every one to be charitable in the judgment of others, and it is also commendable to look well to our own preparation and worthiness before we criticize or find fault with the work of others. But there is a kind of professional patriotism that prompts one to take pride in his calling, and a true humanitarianism that leads us to consider the rights and claims of our fellow beings to the best that can be given them. With this spirit, let us for a few moments consider the requirements that might reasonably be made of one who makes pretenses to the practice of surgery. We recognize that certain standards have to be reached by every one before a license to practice any branch of medicine can be obtained: a diploma from a recognized medical college, and a successful examination before a board of state examiners. A certificate thus obtained gives the candidate the legal right to practice all branches of medicine, whether they be surgery, gynecology, ophthalmology or internal medicine, without interference.

But should not the question of special fitness be raised, especially with regard to those who pretend to hold positions in public institutions, or those of a private character, receiving state aid? In these cases it is not only the right, but the duty of hospital managers, trustees, or directors, to inquire definitely into the ability of their appointees to do the work to which they are assigned. In private life the patient exercises this right, the right to choose his physician, surgeon, oculist, or any other specialist, but to patients in hospitals this right does not come. They must take the physician or surgeon chosen by the governing board, and the responsibility these boards incur may be inferred from a very imperfect knowledge of the kind of work that is done in many hospitals.

The reasons that actuate hospital boards in choosing members of their staffs are various and sometimes very interesting. It is the wish of some boards to extend the benefits of the hospital to as many physicians in the neighborhood as possible—to have a kind of open shop; hence a very large staff and a short term of service. In other cases appointments are made for political reasons, to represent various nationalities, or different religious creeds: "Could the force of folly any further go?" you ask, but we know that just such conditions do exist. Rarely is the question raised of special ability to do the work to which the applicant is assigned.

We know that this is all wrong. All over the country there are men acting as surgeons to hospitals who never do any surgery except during the few months in which they are assigned to hospital duty. Furthermore, these so-called surgeons never go away to learn from real surgeons how the work should be done; they are so self-sufficient that they cannot be taught.

The question is pertinent, why this mad desire to be surgeons should possess so many men on entering the profession. The brass-band enthusiasm by which public journals herald the results of modern surgery turns their heads and leads them to overlook the equally wonderful conquests of internal medicine. Good physicians are needed in greater numbers than good surgeons. Rarely a human being lives for a great length of time without requiring the services of a physician, but many —indeed, the great majority of the human family—never stand in need of a surgeon. And the wonderful triumphs of modern medicine: robbing diphtheria of its terror; the fight against tuberculosis; and the signs of promise in the horizon, the triumph over malarial diseases and yellow fever enabling the government successfully to dig the Panama canal—these are some of the wonders of internal medicine that are equal, if not superior, to anything accomplished by surgery.

It was my pleasant duty a short time ago to address a letter to a number of eminent surgeons of the country, asking each to give me briefly what he considered the essentials in the making of a surgeon. To this letter I have had the following replies:

DR. WILLIAM L. RODMAN, Philadelphia: Some one has said that a surgeon should have the heart of a lion, the eye of an eagle, the hand of a woman. But valuable as these assets undoubtedly are, they are inadequate. In the first place, I consider a thorough anatomic foundation most necessary. Many of the best surgeons and teachers of surgery have previously taught anatomy. At this time, when there are so many good hospitals and experienced surgeons needing assistants, there is no excuse for one contemplating a surgical career not to have had from one to three years as first assistant to a surgeon of recognized standing. In this way will he learn not only what to do and how to do it, but also that which is vastly more important, what not to do. Good judgment, or "horse sense," is both the rarest and most essential quality in a surgeon. "Fools rush in where angels fear to tread." A very large percentage of the ill-advised operations in surgery are done by those who have never had a careful surgical training.

A successful surgeon should of course be a liberal reader of current literature, should be active in societies, and above all things, visit the clinics of other men. It is so easy to be narrow, so difficult to be broad. Lastly, I consider that surgeons of this day, superior as they are in many respects to the former generation of surgeons, could with advantage imitate them in the careful preparation and intelligent post-operative treatment of their patients. Too much is left to house surgeons and nurses. There are many good operators, but fewer surgeons. The words "operator" and "surgeon" are frequently used synonymously, but alas, what a difference!

DR. J. WILLIAM WHITE, Philadelphia: Surgery is a highly technical occupation resting fundamentally on the general principles of biology—normal and pathologic—and requiring, not only clear thinking based on broad knowledge—as do all medical pursuits—but also a certain degree of manual dexterity. In the making of a surgeon these essentials should, so far as possible, be complied with.

A young man or boy, destined to be a surgeon, should be familiarized with the principles of evolution and of natural science and the general laws of plant and animal life, and should be especially instructed in comparative zoology. He should be taught at least elementary physics and chemistry, and it would be of distinct advantage if during this period his eye and hand were educated by animal dissection and experimentation in a biologic laboratory.

It is axiomatic, however, that his work with animals should inflict on them no pain or suffering. While this may be necessary in rare instances, when a trained experimenter is investigating problems related to the welfare of the whole human race, and indirectly to that of the lower animals themselves, the student who is taught by precept or example to disregard it will lose something that will be of far more value to him later in life than even facility in recognizing structures and tissues, in tying blood-vessels, and in differentiating normal and diseased conditions, serviceable as such knowledge would be to him when he begins his real surgical labors. Practical work in a physical and in a chemical laboratory would aid materially in the combined training of hand, eye and brain that is aimed at.

He should have such general education in addition as will enable him to understand and to write his own language, and, if that is English, to read French and German also.

The latter languages are desirable, not only because of the storehouse of useful knowledge that is thus opened up to the student of surgery, but because acquaintance with them leads to clear and precise use of English in speaking and writing, an accomplishment the value of which it would be hard to overestimate.

With this equipment, the graduated theoretical and practical courses in medical schools of the first class would meet the next indications, would be infinitely more valuable to the average student than they ordinarily are, and would leave him at the time of taking his degree ready for the next and final stage of his education as a surgeon. This will last throughout life and may be divided, as Gaul was, into three parts: first, experience; second, experience; third, experience!

DR. J. F. BINNIE, Kansas City, Mo.: 1. Material to work on, viz., a gentleman in good health and blessed with common sense.

2. Preliminary training: good school education, with preferably some manual training. College training, with special courses, if possible, in physics and biology.

3. Good professional training for general practice.

4. Term as intern on medical side in a good hospital.

5. Term as intern on surgical side of a good hospital.

6. Experience as assistant to a good surgeon and as much dispensary work as possible.

7. Membership in a good review club and hard work in it.

8. Preservation of the common sense originally present.

9. Preservation of the health by being temperate in all things, and not too much dignity to permit indulgence in proper amounts of tennis, golf, open air, trashy novels and fun.

DR. GEORGE EMERSON BREWER, New York: The surgeon should, primarily, be a man in the broadest sense of the word. He should possess by inheritance, or acquire by early training, a broad philanthropy and uncompromising integrity. In addition to his technical training, he should cultivate a habit of accurate observation, prompt decision, and logical action. While tolerant of the opinions of others, and amenable to reasonable argument, his training and experience should be such as to enable him to rely on his own judgment in moments of grave responsibility.

DR. HOWARD KELLY, Baltimore: I believe that the training for a surgeon should come through several years of hospital work, under good men. The young surgeon should begin at the bottom, and learn every detail that has to do with surgical work, up to the doing of operations. This presupposes laboratory work, ward work, reading, assisting at operations, operating, first in simple, then in more difficult cases. I believe a training of this kind can be secured only by four or five years' hospital work.

DR. GEORGE W. CRILE, Cleveland: While I think "surgeons" may be made, yet I have thought that they are largely born. The making part of them, in my opinion, consists most effectively in the development of a deep interest in the work; accuracy of observation; industry, and infinite patience. I would recommend these merely as essentials, but after all it is work, work, work, that counts.

DR. ALBERT J. OCHSNER, Chicago: First, the man to start with must be a tremendous worker. He must have the quality of thoroughness and patience, and he must be studious. Then he should have a thorough pre-medical course of at least four years, specializing in languages and science, particularly in German and French; in biology, physiology, comparative anatomy, and he should take a long laboratory course in bacteriology; a fairly thorough course in zoölogy, botany, and chemistry, histology, and embryology.

His medical studies can be accomplished in any one of a dozen of the best schools in the country equally well. He should then serve as an intern in a hospital in which there is a good medical and pathologic service for at least two years. Then, he should become an assistant to a real surgeon for at least five years, giving all of his time to examination of cases, assisting in operations, and after-treatment, examination of pathologic tissue, and research work. Later on he should spend at least one month every year seeing other surgeons work.

DR. JOHN B. MURPHY, Chicago: First of all you must have the man; that is, an individual of strong moral courage, positive convictions, sterling integrity, and a keen recognition of a sense of obligation to his fellow-man. To make a surgeon of him he should have a good medical education. After graduation, he should have an internship of at least one and one-half years in a large general hospital, and work in all of the departments of the hospital. Then he should spend one to three years assisting a surgeon and diagnostician. All of this time his attention should be devoted keenly to surgical pathology.

DR. JOHN C. MUNRO, Boston: 1. Good health.

2. An ingrained regard for the truth; patience and the willingness to make sacrifices without self-consciousness.

3. Education in a school that grounds its pupils well in fundamentals.

4. Training for a year or more in a general hospital that affords opportunities to gain a broad training in internal medicine, as well as in the surgical wards, laboratory diagnosis, and the handling of all classes of people.

5. Special work in acquiring a fundamental knowledge of anatomy and physiology.

6. Apprenticeship in the service of a skilled surgeon for from one to five years, supplemented by research work in animal experimentation, or literary investigation, as seems best.

7. The ability to discriminate the useful from the useless when observing the work of other surgeons, and to modify one's own work thereby.

8. A working knowledge of the principal advances in medicine, therapeutics, etc., and as intimate a knowledge as possible of all definite surgical advance.

9. A reading knowledge of German, French, and Italian.

10. Study abroad only after several years of practice, when certain subjects can best be investigated. Especially charity towards the work of others, modesty in respect to one's own work, and sympathetic honesty toward the sick that apply for aid.

DR. WILLIAM J. MAYO, Rochester, Minn.: 1. A broad pre-medical education.

2. A good medical education.

3. A year as medical intern.

4. A year in pathology, not neglecting gross pathology for a minute.

5. A surgical internship.

6. Five years as an assistant to some active hospital surgeon, all the spare time in general practice, with especial reference to general diagnosis.

7. A life of hard work with frequent trips to visit surgical clinics, attend medical societies, and take part in discussions.

8. Not less than one hour a day with journals and books, and a credit and debit account of time.

From the above permit me to generalize and point out what seem to be some of the essential elements in the making of a surgeon:

First, the man. It is axiomatic that some individuals, if not all, are fitted by Nature, or Nature's God for certain kinds of work.

Our spoken language recognizes the truth in the word "calling." "Avocation" means the same thing. May not this be the way the Great Creator calls men to do His work in the various walks of life?

Poeta nascitur non fit, is a very old and trite saying, but a true one. Happy is the man who recognizes this calling, or interprets it aright and prepares himself accordingly.

"What's a' your jargon o' your schools—
Your Latin names for horns an' stools?
If honest Nature made you fools,
What sairs your grammars?
Ye'd better taen up spades and shools,
Or knappin-hammers.

"A set o' dull, conceited hashes
Confuse their brains in college-classes!
They gang in stirks, and come out asses,
Plain truth to speak;
An' syne they think to climb Parnassus
By dint o' Greek!"

Thus does Burns characterize the pretenders who would obtrude themselves into the sacred realms of poetry.

What are some of the characteristics which we may reasonably look for in one designed by Nature for the work of a surgeon?

As quoted by Dr. Rodman, an old writer says that the surgeon must have the eye of an eagle, the hand of a woman, the heart of a lion; in other words, far-seeing, quick perception, manual dexterity, and courage. Manual dexterity is of great importance: the surgeon must be a handy man. A man with a hand like a ham may become a skilful surgeon, but that is not likely. Some have regarded this work as mechanical; it is that, but much more. The surgical mechanic will never get very far. Marion Crawford says that "surgery is a fine art." That is a more fitting definition, but it does not cover the ground.

There is no kind of work that calls for such a display of physical and mental activity as that under consideration. Every day of his life—yes, many times a day—the surgeon must be the court, the jury, and attorneys on both sides of the case—for what else is a diagnosis?

He must carefully elicit the evidence on all sides, must sift the same by careful cross-examinations, must render the verdict, and finally must pass sentence and carry the sentence into effect.

Added to these physical and mental characteristics, he must be a normal man mentally and physically, possessing cheerfulness, hopefulness, inspiring confidence, and the most perfect optimism. He must be healthy, tireless in his industry, and conscientious, for all science is dependent on conscientious uprightness, and the Golden Rule is applicable in no walk of life more than in practicing surgery.

Second, as to the surgeon's education, the curriculums of the best medical colleges have been so extended and are so complete that their graduates all have a well-grounded preparation for work, and we have no right to complain or to criticize. The preliminary requirements for entering are yearly becoming more and more complete: several of our best schools require a degree of A. B., or its equivalent.

To the preliminary requirements, and the education the student receives in college, there is no objection to be urged. On the other hand, they should receive words of commendation only, and this brings me to the third and final topic.

Third, as to training for work, granting, now, that we have the man fitted by inheritance, endowed by Nature with all the inborn traits above referred to, that the future surgeon's preliminary preparation has been of the best, that he has completed the requirements of graduation in the best medical colleges, and has served a term of one or two years in a general hospital, wherein he may have a wide experience in medical and surgical work, under the care and direction of chiefs of the various departments, is he now prepared to do the work of a surgeon? Many eminent writers have urged that in addition to this hospital practice the young surgeon should have several years' experience in private practice, for it is urged that the conditions are very different in private life from those observed in hospital work. This may or may not be important, according to the kind of training he may have had in his hospital life: a general hospital with a large medical service may be sufficient, though I think that the discriminating judgment that comes from several years of general practice renders him a better balanced man in the matter of diagnosis.

But, now, is the surgeon fitted to do operations of importance? Let me quote from surgeons named above as to requisites.

Rodman says: "One to three years as first assistant to a surgeon of recognized standing.

White: Experience, experience, experience.

Binnie: "Experience as assistant to a good surgeon."

Kelly: "Several years of hospital work under good men. I believe that training of this kind can only be secured by four or five years of hospital work."

Ochsner: "Assistant to a real surgeon for at least five years."

Murphy: "He should spend one to six years assisting a surgeon and diagnostician."

Munro: "Apprenticeship in the service of a skilled surgeon from one to five years."

Mayo: "Five years as an assistant to some active hospital surgeon."

One of the most eminent surgeons of the West acted as assistant to a real surgeon for a period of nine years, rarely or never receiving a fee for his services; but that man to-day is a power wherever he goes. In his clinic, which is one of the largest and most interesting in the country, you will find visitors from all parts of this country and Europe, and in the deliberations of the Surgical Section of the American Medical Association, or the American Surgical Association, crowds hang on his words of wisdom, and attest their respect for his skill and great surgical knowledge.

Were surgery nothing more than a trade, the apprenticeship should extend over several years: a machinist must have at least three years' training before he is permitted to do a machinist's work; and is the human body of less importance than a machine?

Surgery has been called a fine art. What years the young painter or sculptor must spend in training before his work can command respect, or appreciation! Surgery is more than a trade or a fine art. It is the grandest warfare the world knows about: the conflict of the forces of scientific skill and training against the wickedest foes to human life, in which the battlefield is the sentient, quivering, suffering human body.

And finally, several of the eminent men quoted above advise the surgeon to go out and see the work of his fellows.

"He should spend at least a month every year seeing other surgeons work," says the wise Ochsner: "Frequent trips to visit surgical clinics," says the dominant Mayo. And those who have acted on this advice know only too well what the benefits are: the inspiration, the mental uplift that comes makes one feel that he has been associating with the immortals.

109 South Franklin Street.

Gastric Capacity of Infants.—The gastric capacity at birth is reckoned as 1 per cent. of the body weight, so if the child weighs 100 ounces, its gastric capacity is 1 ounce, and during the early months 1/30 of an ounce is added for each day of life.—N. Winslow, in *Hospital Bulletin of the University of Maryland.*

HOOKWORM DISEASE IN MINES OF CALIFORNIA

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The occurrence during the past year of several cases of hookworm disease in miners in California led me, under the auspices of the California State Board of Health, to investigate the subject for the purpose of determining whether or not the infection had become endemic in the mines.

While imported cases of hookworm disease are not infrequently observed in this state, sixty having been reported by me over five years ago,[1] its occurrence among miners had not previously been noted here. Attention was first drawn to the occurrence of the disease in Jackson, Amador County, by Dr. F. F. Sprague, and later by Dr. E. E. Endicott. Both of these physicians believed that the infection occurred in the adjacent gold-mines, but as the cases observed were all either in persons who had been exposed to infection in other parts of the world or in foreigners of not many years' residence here—Italians, Austrians or Cornishmen—many of whom we know are infected with hookworm before coming to this country, it was necessary to obtain more conclusive evidence before it could be considered that the disease had gained a foothold here. Further, the fact that the disease has not been reported as originating in any mines in the United States, made it appear that we were dealing, in all probability, with imported cases only.

In order to prove conclusively that the disease occurred endemically in a mine it would be necessary to demonstrate the larvæ in the soil from the workings, or to find the disease in a person who had not been exposed to infection elsewhere for at least seven years and preferably ten years. On account of the wandering habits of many of the miners, and the very small number of Americans employed, very few men were available for the purpose of such investigation.

In Mine 1, the results were as follows:

CASE 1.—F., American, native of California, never out of this state; health good except for occasional attacks of abdominal pain, due, it was believed, to chronic appendicitis. Ova of hookworm present; eosinophilia 15 per cent.

CASE 2.—M., American, native of California, never out of state; mining for past two years, always in this mine; health good. Ova of hookworm present; eosinophilia 13 per cent.

CASE 3.—K., nativity not known; not out of California during past forty-eight years; resident of Jackson for last seventeen years; health good except for eruption on leg extending over considerable surface, a typical ground itch. Ova of hookworm present; eosinophilia 12 per cent.

CASE 4.—N., native of England; resident of California for twenty-five years; employed in this mine for fifteen years; according to his own statement health had not been good for some time; shows evidence of moderate anemia. Ova of hookworm present in feces; blood not examined.

CASE 5.—L., nativity England; nine years in Jackson; health, according to his own statement excellent; anemia quite apparent, however. Ova of hookworm present; eosinophilia 5 per cent.

CASE 6.—F., Italian; eight years in California; five years in Jackson; unable to work for past five months on account of weakness. Ova of hookworm present; eosinophilia 12 per cent.

Specimens of earth were taken from various parts of the mine where conditions of heat and moisture were suitable for the development of the parasite, and in one from a cross-cut at the 1,600-foot level hookworm embryos were demonstrated.

In Mine 2 it was impossible to obtain feces for examination. Larvæ of hookworm were demonstrated in specimens of soil taken from the workings.

In Mine 3 several cases were found, but none had been in California a sufficient number of years to be of any positive value for the purpose of this investigation. No examination was made of the workings of the mine.

1. California State Jour. Med., April and August, 1905.

EXTENT OF INFECTION

The men were looked over in mines 1 and 2 after they had finished work, and were bathing and changing their clothes. Evidence of the disease was everywhere to be seen. The peculiar color of the face, which is so often found in this disease, even when the blood shows but slight reduction in the hemoglobin, was observed quite generally. Quite a number showed moderate anemia, while occasionally it was quite pronounced. It should be borne in mind that we are now considering only those men who were able to work; those so ill that they were unable to work will be referred to later. Several cases of ground-itch were observed, the arms and hands being the most frequently affected parts.

On account of the difficulty of obtaining a sufficient number of stools to form an estimate of the percentage of infected persons in the mines, blood-smears were taken and the eosinophils counted with the following results:

MINE 1.—Specimens were taken from eighteen miners. Some men were selected who showed evidence of disease. In all examinations 100 cells were counted and Wright's stain, or Oliver's modification of it, was used.

Number of Patient.	Per cent. of Eosinophilia.	Number of Patient.	Per cent. of Eosinophilia.
1	13	10	13
2	24	11	21
3	17	12	9
4	12	13	10
5	18	14	18
6	7	15	3
7	15	16	20
8	13	17	11
9	5	18	12

Number 9 was referred to previously as an infected subject with nine years' residence in Jackson, so that the probabilities are that all of the eighteen are infected, except possibly Number 15, who shows an eosinophilia of 3 per cent. Stools were also obtained from the following on this list and all contained ova of hookworm: Numbers 4, 7, 8, 20.

Feces from eight individuals in this mine showed seven positive. The negative stool came from an assayer whose work until comparatively recently had been entirely above ground. The infection in this mine, it would appear, is close to 90 per cent.

MINE 2.—Men showing evidence of the disease were in some cases selected.

Number of Patient.	Per cent. of Eosinophilia.	Number of Patient.	Per cent. of Eosinophilia.
1	8	8	4
2	3	9	7
3	0	10	8
4	6	11	4
5	5	12	24
6	2	13	8
7	3	14	15

It was impossible to obtain stools from any on this list. The conditions in this mine were very good, there being less moisture throughout most of the workings than in the other mines. Yet from the appearance of the blood, ten out of the fourteen examined, or 70 per cent., should be looked on with suspicion.

MINE 3.—Blood was taken from the first eleven men who happened along. No selection was made in any case, with the following result:

Number of Patient.	Per cent. of Eosinophilia.	Number of Patient.	Per cent. of Eosinophilia.
1	5	7	20
2	11	8	14
3	7	9	0
4	14	10	15
5	6	11	5
6	14		

Here it would appear that all but one are infected, or over 90 per cent. In Number 10 and Number 11, the only ones on this list from whom stools could be obtained, ova of hookworm were found present. Of course it should be remembered in considering the increase in the eosinophils that such might be due to infection with other parasites, but in the examinations of all the stools that could be obtained, evidence of other parasites was generally lacking. In one case *Strongyloides stercoralis* was present, and in another, *Trichocephalus dispar*.

CONDITIONS IN THE MINES RELATIVE TO DEVELOPMENT OF THE DISEASE

1. *Temperature.*—It has been shown that in mines with a temperature below 70 F. the disease makes but little headway. In the mines of Jackson, in portions where the men are working, the temperature is usually kept, by forced draft, below 70 F., but in abandoned portions and adjacent cross-cuts, the only places where a man would be likely to deposit his excrement, the temperature was often as high as 80 or 90 F.

2. *Moisture.*—A sufficient amount of moisture was found in portions of all of the levels visited.

3. *Disposal of Excrement.*—Although there are rules in force against the contamination of the workings with feces, it was not very difficult to find evidence that these rules had been broken. The arrangement of tanks in the shafts for the use of the men is open to criticism and is believed to be one of the modes of infection.

ECONOMIC ASPECTS

There is no question but that the general efficiency of the men is noticeably impaired. At one mine, employing about 300 laborers, it was stated that a reserve of about twenty-five men had to be available to replace those who, on account of sickness, did not appear for work. Many of the men have to take time off now and again to recuperate. Several who were unable to work stated that when they arrived in Jackson they were perfectly strong and well. A large number of these men were encountered on the streets, some of them presenting marked degrees of anemia.

The greatest loss to the mine operators is occasioned by the large number of those moderately affected. In one mine a superintendent who was infected ascribed his somewhat poor physical condition to the results of an illness which occurred a couple of years ago. Another man occupying a responsible position had to be given a vacation every now and then on account of declining health. He presented a quite noticeable anemia, and on examination of the stools, showed a heavy infection. Any number of similar cases could be cited but these examples should be sufficient to show very clearly that the average miner infected with hookworm cannot do the work of a normal man. A loss of 20 per cent. in the efficiency of those infected would be a conservative estimate. That would mean in Mine 2, for instance, where over 300 men are employed at an average of about $2.50 per day, estimating the number of those infected as low as 50 per cent., a loss of over $20,000 a year.

When it is remembered that nearly 30 per cent. of all deaths in Porto Rico are due to hookworm disease, it is safe to say that directly and indirectly many have died from the infection contracted in these mines.

The danger of the disease being spread in the neighboring valley should be considered, especially as the sanitary arrangements for the disposal of sewage in the town of Jackson are very poor, and as many of the infected miners who are too ill to work in the mines, live on near-by farms until recuperated.

The extent of infection throughout the gold-mines of California can very readily be estimated. The conditions of heat and moisture necessary for the development of the larvæ are more or less the same in all of the mines and all employ the same class of labor. It is believed that it will be found that all of the mines of California are more or less infected, and that probably conditions will approximate those found in Jackson.

The same statement can be made for Virginia City, Nevada. While the mines of Sutter Creek, near Jackson, were not visited, cases which undoubtedly were contracted there were seen. The origin of the infection of the California mines undoubtedly extends back many years. It was probably introduced by laborers from Cornwall, Austria or Italy, in which countries the disease occurs extensively in the mines.

SUMMARY

It may be stated in summary that:

1. Hookworm disease is endemic in certain mines of California.

2. From 50 to 80 per cent. of those working in these mines are infected.

3. The infection undoubtedly is present in practically all of the gold-mines of California, and in those just over the border of Nevada.

In conclusion I wish to express the belief that hookworm disease is endemic in many mines in various parts of the United States. In many of the so-called cold mines, portions are found where the temperature is constantly high and moisture is present. In all probability most of the mines of this country have been exposed to infection, for in nearly all of them may be found Hungarians, Austrians, Italians or Cornishmen, some of whom are certain to have brought the infection with them from the mines of their countries.

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REPORT OF A CASE OF SPLENIC ABSCESS

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This case presented a variety of symptoms which, as far as the spleen itself was concerned, were absolutely negative and it was not until autopsy that a large splenic abscess was discovered. In view of the extreme rarity of this condition and of the lack of symptoms indicating splenic trouble it is believed a full report of the case would be not only instructive but of historical interest.

History.—M. P. V., fireman first class, U. S. Navy, was admitted to U. S. Naval Hospital, Philadelphia, March 2, 1910, with a diagnosis of appendicitis. (Case paper No. 67.) The patient was aged 29 years and 2 months, unmarried and denied syphilis; did not use alcohol or tobacco; had always been in robust health, and, about a year previous to admission,

had two months of tropical service. Although the skin had been noticeably bronzed since childhood nothing indicating gall-bladder trouble could be elicited. A careful inquiry as to gastro-intestinal disturbances and family history was also negative. Heart, lungs and kidneys were apparently normal.

Examination.—On admission to this hospital there was marked rigidity of right abdomen and extreme tenderness over the appendix; temperature 100.4 F.; pulse 78, regular and full; respiration normal; tongue coated and bowels costive. The attack began with epigastric pain and nausea on the day before admission, the pain in a few hours being centered over the appendix; patient vomited before reaching the hospital; white count 13,000. An immediate operation was decided on.

First Operation.—The abdomen was opened by the Battle incision and the appendix found greatly distended, with a small gangrenous perforation at its base, through which fecal matter had escaped. There was also a gangrenous spot on the cecum surrounding the base of the appendix. The appendix was removed, and in addition the gangrenous spot on the cecum was surrounded and buried by a purse-string suture, over which a continuous Lembert suture was introduced. The parts were dried and cleansed by mopping with gauze and a cigarette drain of iodoform gauze brought out through the wound. A rubber drainage tube was passed down into the pelvis and the wound closed with the exception of a small opening for the drains. The patient was placed in Fowler's position and Murphy's proctoclysis started.

Subsequent Course.—On March 10 there was a free discharge of pus from the cecal drain which had a fecal odor. This gradually lessened and the patient passed through an uneventful convalescence with the exception of the development of a small abscess in the rectus muscle, the result of a stitch becoming infected. On March 24 the sinus had completely closed, one of Bier's hyperemia cups being used for five days.

April 1, 1910, the patient had a slight chill in the afternoon followed by profuse sweating. The temperature ranged from 99 F. to 103 F., and a slight pain developed over the gall-bladder region, but the liver dulness was not increased. For seven days after this there was an afternoon chill, fever and sweat, the temperature reaching usually 104 F. Daily white counts never ran above 8,000 and numerous differential counts were normal. The test for iodophilia was negative at this time as were also the urine, sputum and feces. The tongue was thickly coated and anorexia was marked. Repeated blood examinations were negative for the malarial parasite and several Widal reactions were also negative. The Cammidge reaction was negative, as was also a culture of the blood. Iodophilia now began to be positive and patient developed a slight cough, though no lung involvement could be made out. The pulse at times reached 100 but was usually between 70 and 80. Although there was no pain or tenderness in the loin or operation scar the latter was incised and probed but nothing unusual found. The pain over the gall-bladder region increased somewhat and at this time there was quite a perceptible deepening of the bronzed condition of the skin. The lungs and entire abdomen were repeatedly examined but, with the exception of the tenderness over the gall-bladder region, nothing abnormal could be found. At no time could the spleen be palpated nor was there ever the slightest pain elicited by the deepest pressure in this region.

Second Operation.—April 8, a Bevan incision was made over the gall-bladder and the latter found to be imbedded in a rather dense mass of adhesions and these when liberated disclosed a very much thickened and dwarfed gall-bladder. This was incised and explored, as were also the ducts, but no stones were found. The head of the pancreas seemed to be enlarged and harder than normal. The gall-bladder was drained with a Mixter tube and for two days there were no chills or fever, but at the end of that time the pyemic condition began again. The gall-bladder drained well but the symptoms were practically the same as before operation with the exception of the development of a systolic murmur heard loudest at the base. April 31 an aspirating needle was introduced in the eighth intercostal space in the axilliary line and the liver was needled in five different directions without locating pus. The symptoms of marked sepsis continued and the patient finally died of exhaustion on June 9.

Necropsy.—Cutaneous surface was deeply bronzed; emaciation marked; adhesions in right iliac fossa broken up and revealed small, firm, smooth scar in cecum at the site of the excised appendix; ascending colon dissected up to right kidney pouch with no indication of any previous inflammatory condition; gall-bladder firmly adherent to abdominal wall at site of operation wound. On palpating in left abdomen it was found that a mass of small intestine and omentum was closely adherent over the spleen, which could hardly be felt through the distended intestine. The intestinal adhesions were carefully broken up, showing the spleen to be about two and a half times as large as normal and closely adherent to the stomach and diaphragm. In breaking up the diaphragmatic adhesions a large pus sac was opened in the discolored, friable spleen. This sac was located in the center of the spleen and was about the size of a goose-egg. Two smaller abscesses about the size of a pigeon's egg, were located at the periphery. The splenic vein was thrombosed up to the vena cava. On sectioning the liver, which was slightly enlarged, there was to be seen widespread fatty degeneration, with here and there small necrotic spots about the size of a pea. Both ventricles of the heart were dilated and the left ventricle very much thinned. There were to be seen greenish-yellow nodules and patches on the flaps of the mitral valve and left ventricular endothelium, showing the presence of endocarditis. Lungs and pleuræ were apparently normal. The head of the pancreas was enlarged and nodular. Both kidneys were slightly enlarged and showed minute areas of fatty necrosis. The small intestine was blanched and contained a small quantity of tenacious greenish yellow material.

The post-mortem findings clearly indicated a widespread pyemic condition with a primary focus in the spleen, and it would seem that the lesson to be learned from the history and findings in this case is that the splenic condition could only be diagnosed by exclusion. Systematic writers on this subject invariably refer to pain in the left side high up. At no time was there the slightest pain in this region, nor could the spleen be palpated. It is believed that the splenic abscess resulted from the gangrenous pyogenic condition of the appendix and cecum. Had there been the slightest suspicion that the spleen was diseased a splenic puncture would have been done. It is further believed that the splenic puncture should have been done shortly after the gall-bladder operation, in view of the fact that everything but the spleen had been excluded. Had this been done the abscess in the spleen could have been drained posteriorly with a possible chance of saving the patient. Of course this latter conjecture is not free from the criticism that the patient could not have lived any way on account of the pyemic condition which was in all probability present at that time, but there is no question as to the fact that at least the patient's chances of recovery would have been greatly improved had the abscess been located and drained, and of course the sooner this was done the more favorable the prognosis.

IDIOSYNCRASY TO ASPIRIN

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In THE JOURNAL I recently read a communication[1] in regard to idiosyncrasy to aspirin, of which I had an almost parallel case on November 19.

On the advice of a friend a young man took a five-grain tablet of aspirin for headache. In about one hour, still suffering, he took another, and then lay down on a cot in his office. In a few moments he arose and remarked to some one present,

1. Berl. klin. Wchnschr., 1893, No. 19.

"I feel mighty queer, and can hardly see." He then looked in the mirror and exclaimed, "What is the matter with my face? I am going to a doctor!" He walked nearly two blocks to my office, and in attempting to walk up to the door (just three steps up from the pavement) fell, and then had to be assisted into my office. He hurried in without waiting to knock, and in a voice which indicated great distress, exclaimed, "Doctor, some one has poisoned me." This was probably about half-past one, and about an hour and a half after taking the first tablet. The mucous membranes of his eyes, nose and mouth were very edematous. The eyelids and lips were everted and swollen to twice the normal size, the conjunctivæ very much congested; the patient could hardly breathe through his nose at all. Tonsils and uvula were in a state of congestion, the articulation was very indistinct, and when the patient attempted to raise his voice to a higher pitch, it had a peculiar metallic sound, which would end with a muffled tone. The veins in his temples and throat were knotted, and in places were standing out like hard cords. I found his circulation 136, respiration 24, afterward going down to 12, temperature normal. His face was greatly flushed, and this, with the eversion and swelling of eyelids and lips, made him a ghastly-looking object.

I made him lie down on a cot, and as he seemed to have considerable trouble in breathing, removed his collar and opened his shirt. I had the nurse give him a hypodermic injection of digitalin, bathe his face, neck and head with hot water, and apply continuous hot towels, and keep him quiet. Later, as he complained of great pain in the shoulders and neck, I also applied continuous hot pack to those parts, and, as the circulation remained weak, ordered hypodermic of strychnin. At half-past two he suddenly fell into a profoun· sleep; his circulation slowed down and became stronger, but respiration continued very slow, and seemed almost to stop at times. His slumber was so profound that the removal and the replacing of the hot towels did not seem to disturb him at all. I allowed him to sleep until nearly four o'clock, when I awakened him and had him conveyed to his home, which was about three miles in the country. He stood the trip all right, and after getting into bed he almost immediately fell asleep again. In about three days the edema had disappeared from face, nose, eyelids and mouth, but the throat remained irritated for at least ten days longer, and the patient was slow in regaining his strength.

The report of H. E. W. and this case show that some have a decided idiosyncrasy to this drug, and that it should be listed as one of the dangerous drugs, which should not be retailed indiscriminately to the laity.

THE USE OF CYLINDRICAL GAUZE AND COTTON DRAINS IN DISCHARGING EARS

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Aural surgeons must have witnessed the efficiency of gauze drainage in the ear following mastoid operations. The pus is constantly carried by the moist gauze packing in the external auditory meatus to the preferably wet gauze protective dressing. The solution with which this dressing is moistened should not be strongly antiseptic or irritating. Normal saline is excellent, although to encourage osmosis I sometimes employ a heavy sterile solution of magnesium sulphate. The packing in the auditory canal should be carried down to the tympanic membrane. There should not be any space left to serve as a reservoir for pus. This obliteration of space may be readily accomplished by placing over the outer end of the auditory canal a few folds of the end of a narrow 1 inch or 2 inch strip of gauze packing which has no loose threads on its margin, and then with a rough or screw-ended probe pressing the gauze directly in, until it touches the drum head. If a smooth probe is used or no fold made in the gauze the probe is likely to slip through the single layer of gauze, irritating the canal or injuring the ear-drum instead of carrying the gauze before it.

In acute or chronic otorrhea, a gauze drain is also very useful, but requires changing once or twice a day, which must be done by the surgeon, since such a drain cannot be inserted safely by untrained attendants. A few aurists, in certain cases, advocate gauze drainage but the patient must be in a convenient hospital or make frequent visits to the aurist's office which in practice is likely to be either too inconvenient or too expensive, or both. To overcome these objections I employed for some time a drain which my office assistants made by rolling a narrow strip of gauze doubled on itself on the end of a sterile toothpick, giving it stability by wrapping its central part with thin gutta-percha gummed together by any unirritating sterile ointment. It presented the appearance of a diminutive cigarette, ¾ to 1¼ inches long, about ⅛ inch in diameter, with the gauze projecting about ⅛ inch beyond the surrounding gutta-percha and with a toothpick sticking in the ravelled end of the gauze. The drain was made loose on the toothpick before being introduced. After its partial introduction the toothpick was withdrawn and its opposite dull end was used to press the gauze drain well into the ear. The outer end of the canal was then packed with gauze to help retain the drain in place and to absorb any excess of discharge when there was more than the drain could contain. Gauze is much more serviceable than cotton for this purpose.

Similar drains are now being manufactured. At first drains made altogether of gauze tightly wrapped by machinery were tried, but they were too stiff, hurting the patient on introduction. Drains made wholly of cotton were not stiff enough to be introduced. The cylindrical gauze and cotton drains which I recommend consist of cylinders of cotton wrapped in gauze, which is both soft and pliable, so as not to injure the delicate tissues of the ear, although sufficiently firm so that they can be readily introduced. They are supplied sterile, ten in an envelope, each six inches long. They may be cut by sterile scissors to any desired length, depending on the depth of the external auditory canal, and are supplied, of proper length, to the patient, in dry sterile two-dram vials or wrapped in sterile gauze. These drains are also very useful in draining small abscesses or cavities anywhere, and are easily introduced. They may be used any desired length. Several, side by side, may also be employed for drainage, as in some mastoid wounds.

They are easily introduced into and removed from the external auditory meatus by any simple forceps. They may also be introduced by first impaling them on the end of a sterile toothpick, using the latter as a handle. When there is much discharge I have the patient keep one in the ear day and night, putting a fresh one in every morning and evening; but after the discharge is much lessened it is employed only at night. After its removal, if there is any excess of discharge, it should be wiped away with cotton on the end of a sterile toothpick. Any drops which the aurist may wish to employ, *e. g.*, 5 or 10 per cent. phenol in glycerin, compound tincture of benzoin, boroglycerid solution, or boric acid and alcohol solutions in different strengths, may be warmed and poured into the upturned

ear and allowed to remain for several minutes, when the excess may be removed and a fresh drain introduced. In order to protect the skin and prevent excoriation by the discharges, once or twice each week a small amount of some ointment, *e. g.*, zinc oxid or calomel, 2 per cent., may be smeared by a cotton-wrapped applicator on the outer two-thirds of the canal, or a very little may occasionally be placed on the sides of the drain but not on its ends.

Dry gauze will absorb more discharge than wet gauze, but the latter, especially if a heavy salt, *e. g.*, magnesium sulphate, has been dissolved in the water, will encourage free osmosis and more readily absorb and carry away the discharge. If the outer gauze pad retainer is used moist, as I think in certain severe cases it should be, the whole should be covered by a large thick dry gauze pad to protect the ear from changes in temperature and infection from without. This pad may be readily fastened in place by a binder similar to Beck's, made of gauze with three tapes, one over the head meeting the others, which are first tied around the neck.

I think that the drain is particularly serviceable in acute cases and in chronic cases with much discharge. When the pus is carried away from the inner end of the auditory canal drainage from the middle ear is encouraged. The gauze pads over the outer end of the drains should be removed whenever saturated with pus, and in many cases the drainage is so free that they must be changed very frequently. I have never experienced any trouble in having patients use the drains, and have had no accidents with them. I do not think that more granulation tissue has appeared than in corresponding cases with inferior drainage, if as much.

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MUST THE TINCTURE OF GUAIAC BE FRESHLY PREPARED?

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Since Weber's modification of the guaiac-turpentine test for occult blood in the feces and stomach contents,[1] every writer on this subject has uniformly insisted on using only the freshly prepared tincture of guaiac. Many have advised that the interior of a fragment of guaiac should be selected. During the past two years, I have experimented with older tinctures, controlling the reaction by the freshly prepared tincture. To my surprise, I found no evidence of deterioration; in fact, I often observed a more sensitive reaction from the older tinctures.

The method of preparing the tincture is as follows: Rub the guaiac resin in a mortar to a fine powder, slowly adding 95 per cent. alcohol. Be sure to have a residuum of guaiac in the mortar, thus insuring a strong tincture. Filter and keep in a glass-stoppered bottle. Dilute a portion of this stock tincture with 95 per cent. alcohol (tincture 1 part, alcohol 5 parts) and keep in smaller glass-stoppered bottle for daily use.

The stock tinctures used varied in age from two months to eight months. The diluted tinctures were kept only several weeks, but never showed any loss in the delicacy of the reaction.

The advantages secured by this method are obvious. The daily preparation of the tincture is a nuisance; moreover, the guaiac resin contains many insoluble particles. Therefore the daily prepared small quantity of the tincture must vary much in strength. The tincture made in larger quantities is more uniform and in my experience is more sensitive and does not quickly deteriorate.

1. Berl. klin. Wchnschr., 1893, No. 19.

AN EASY AND PAINLESS METHOD OF REMOVING ADHESIVE PLASTER

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Such a frequent and simple procedure as the removal of adhesive plaster from the skin of a patient is not infrequently accompanied by considerable pain and discomfort. Especially is this true if the plaster has been placed over hairy surfaces, or if the hair has grown subsequent to the application of the plaster. The usual methods of aiding the removal of the plaster by the use of benzin, alcohol and peroxid of hydrogen are not particularly effectual while, in themselves, these agents often add to the patient's discomfort.

I discovered by accident that oil of wintergreen when applied to adhesive plaster removed completely the adhesive elements in a very short time and since that time I have found this agent a most useful one for this purpose. It is necessary only to use a small amount of the oil, which is applied directly to the plaster and easily spreads itself throughout the adhesive material. As far as I am aware this agent is not in common use for this object and as the aim of a physician or surgeon is to relieve instead of causing pain it seems well to call the attention of the profession to the value of the method. When extensive areas of plaster are to be removed the application of an ointment of adeps lanæ hydrosus with 10 per cent. of oil of wintergreen incorporated is even more useful than the oil alone.

THE TREATMENT OF EXOPHTHALMIC GOITER WITH SPECIFIC ANTISERUM

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Several years ago I prepared what may be termed anti-thyroid serum, according to the directions of Beebe, and had the serum given a trial in the treatment of exophthalmic goiter, with negative results. The results were not published at the time on account of the feeling that possibly the negative character of my results might have been due to slight variations in technic as compared with that of Beebe, and I did not wish to cast a doubt on positive work of this nature so long as the subject was in a state of active experimentation. Since that time negative results have been noted by several observers and it is felt that my results should be published.

The work was done in the University of California. The preparation of the thyroid protein was done strictly according to the published procedure of Beebe. The material was fresh thyroid glands removed by surgical operation from patients with subacute active exophthalmic goiter, the glands being used fresh from the operating-table. The animals selected for immunization

were Belgian hares, for reasons connected solely with the internal administration of the animal house. These animals were subjected to increasing doses of the thyroid protein, until the serum of one of them on being tested gave a good precipitation with the material used in the immunizations. The thyroid protein is quite toxic to rabbits. We lost several, and all lost weight during the period of immunization. The total final number of rabbits, eight in all, were bled to death and the serum carefully collected, freed of corpuscles and filtered through a thin infusorial filter. It was then tested for its specific reaction, which at 1 to 10 gave a large precipitation within a few minutes. From this point I made a radical change in the technic. I was not able to bring myself to feel that it was safe to dispense this native serum, on account of the possibility of the presence of tetanus spores, without chemical sterilization. I therefore added trikresol to it precisely as is done in the manufacture of diphtheria antitoxin, and allowed the serum to "lager" for six weeks. When it was tested again for its specific reaction at the end of this time, I was able to observe no change. This serum was then kept at low temperature until dispensed.

Dr. P. K. Brown, of San Francisco, tried this serum in several cases of active exophthalmic goiter, with absolutely negative results. Not only did the serum produce no change or amelioration of the symptoms or signs of the disease, but large amounts of the serum could be injected without the causation of any results whatever. In other words, the serum was neither curative nor toxic.

Observations on the serum were occasionally made after the determination of its negative value in the treatment of exophthalmic goiter. The specific reaction gradually decreased, and finally within a year after the serum was prepared, it could no longer be elicited. Evidently the precipitating protein is denatured on standing, probably through a reaction of hydrolysis.

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CHRONIC INFLUENZAL RHINITIS PROMPTLY IMPROVED BY VACCINE THERAPY

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The following case of chronic influenzal rhinitis seems to merit report because of the prompt and decisive curative effect of inoculations with heated influenza bacilli.

About four years ago the patient, a physician aged 54, had an attack of influenza and ever since there has been a more or less profuse discharge from the nose, at times so abundant that several handkerchiefs would be soiled during the forenoon, even when nasal washes were frequently used. At the time of the first examination (Aug. 4, 1910) there was a very profuse mucopurulent or purulent nasal discharge which contained many polymorphonuclear leukocytes and some bacteria, including a Gram-staining coccus and a Gram-negative bacillus. On plates of blood-agar (human), the discharge gave rise to some large white colonies composed of staphylococci, and surrounding these, many small dewdrop-like colonies which were difficult to see and which were composed of bacilli. Pure cultures were obtained on slanted blood-agar. The bacillus was not motile and was regarded as an influenza-like bacillus because it was small, Gram-negative and grew in symbiosis, forming minute colonies. A few days later, plates were again made from the discharge with practically the same results. At this time, the patient's opsonic index for the bacillus was 0.3. Contrary to expectations, this bacillus was not subject to much spontaneous phagocytosis,[1] and no difficulty was experienced in estimating the opsonic index. A vaccine was prepared from the bacillus, by heating at 56 C., for thirty minutes, and 12,000,000 bacilli injected hypodermically without any apparent effect, except that the opsonic index now became normal; on the second day the index was 3; on the third day 5; and on the fourth day 12. Four days later 50,000,000 bacilli were injected and on the following day the patient felt sick and could not eat or sleep; the discharge did not seem quite so abundant and smears showed that leukocytes had taken up a great many bacilli; very few cocci were present in the smears, and on plating a loopful of the discharge on blood-agar, only three colonies of cocci developed, as compared with a large number of colonies of the influenza-like bacillus. Six days later the discharge as ordinarily obtained did not contain any bacteria; on sneezing, however, the material produced contained many bacilli, most of which were inside of leukocytes, some leukocytes being crowded to the utmost with bacilli. The patient was now given an injection of 100,000,000 bacilli, which did not cause any symptoms, and on the following day the nasal discharge had diminished very much. From now on the discharge decreased daily and in two weeks it had practically ceased.

The patient went to his home in Colorado August 28, and the injections could not be continued regularly after that time. In a letter dated November 4 he wrote that he had been in the best of health, but that there was still a little discharge.

1743 West Harrison Street.

1. Tunnicliff and Davis: Spontaneous Phagocytosis of Fusiform Bacilli and Influenza Bacilli, Jour. Infect. Dis., 1907, iv, 66.

RÖNTGENOGRAPHIC EXAMINATION OF THE BLADDER

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Considerable progress has been made of late in the diagnosis of displacements of the stomach and large intestines and in demonstrating irregularities in their walls by means of the Röntgen rays, following the ingestion or injection of bismuth solutions. It has occurred to me that distention of the urinary bladder with bismuth solution and immediately taking a Röntgenograph would be of value in outlining its (a) position, (b) size and (c) conformation and that irregularities in the vesicle wall as, (d) projection of tumors, (e) diverticula or pouching and (e) anomalies could all be diagnosticated and the approximate size and shape of the deformity would be shown in a permanent record.

It is not always easy or advisable to use the cystoscope in certain diseases of the bladder, and in some forms of prostatic hypertrophy it is practically impossible to insert the instrument; while in some instances it would be an absolutely dangerous procedure. In most cases there is no objection to it, and it is easy to insert a sterile catheter through which passes the solution used to bring about the distention. The process is completed by taking the Röntgenograph.

TECHNIC

Pass a sterile, soft catheter and irrigate the bladder with boric acid solution. When the washings come away clear, measure its capacity, with the bladder empty, distend with the measured quantity of the following solution:

℞	Gm. or c.c.
Bismuthi subcarbonatis	50.
Kaolini	250.
Aquæ destillatæ	1000.

(Formula of Dr. Haenisch of Hamburg, Germany, and used by him in examination of the large intestines.)

Take at least two Röntgenographs, one in the ventral recumbent position with the anode centered over the sacrococcygeal articulation; this should be a standard exposure for the bladder, always preserving the same distance from anode to plate. Center as above and a Röntgenograph will result from which reliable comparison as to size, position and conformity can be made. The second exposure can be taken at any desired lateral or dorsal angle. The proper angle found, stereo-Röntgenographs would be of great value.

The bismuth solution is well borne by the bladder. In one patient with cystitis it was the only injection which he could retain with comfort. The solution can be removed by irrigation after the exposures have been made, or allowed to pass off naturally. The danger of bismuth poisoning from absorption is practically nil.

URETEROTUBAL ANASTOMOSIS

A PRELIMINARY REPORT

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Owing to the rather discouraging results following partial excision of bladder for malignant disease, the complete removal of the organ is, as a rule, the only procedure that holds out any hope of lasting cure. The all-important problem in such radical work is, of course, to establish an outlet for the urinary secretion, and one that combines the greatest insurance against ascending infection with the least annoyance to the patient.

Several more or less ingenious methods have been devised. Watson proposes preliminary nephrotomy and permanent drainage through the loin. This method may afford fairly good protection against kidney infection, but must be frightfully annoying to the patient.

Ureterotubal anastomosis.

Maydl's[1] plan of ureteral implantation into the intestine has been used. This method, or its modifications, originally devised for exstrophy of bladder, permit of control of urinary secretion, and would be excellent were it not for the great danger of ascending infection. The death-rate from this source has been 50 per cent. This is higher than when used for its original purpose, as in exstrophy of bladder, from long exposure to the exterior, ureters have acquired some degree of immunity to ordinary types of infection. The danger of infection in above operation is not only immediate, but threatened at any subsequent enteritis.

Pawlik[2] implanted the ureters into the vagina, Sonnenberg[3] into the urethra and Rovsing[4] with others, left ureters in the skin opening, all with good immediate results.

Thus it seems that operations that aim to give the patient the greatest comfort are also associated with the greatest danger. The genital system, closely related as it is to the urinary apparatus, both in the early embryo and throughout life, should, it seems, be the ideal outlet for the urinary secretion. Through this route secondary infection ought to be reduced to a minimum. The only drawback is, of course, lack of control, but this is somewhat counteracted by the favorable location for wearing of a urinary receptacle.

Working along the above theory, I am now endeavoring to anastomose ureters with the tubes, as in the accompanying illustration and also to implant them into the uterus. The immediate results in dogs seem very promising. Besides a trial dog, thus far only two dogs have been used of a coming series.

Dog 1.—Brown and white, large bitch. Operation, January 4. Anesthesia, ether. The ureters were dissected up and cut off close to the bladder and distal end tied. Bladder was left intact. Both tubes were then cut off about 4 cm. from the uterus and proximal end tied. A through-and-through purse-string suture was then inserted in the distal end of the tubes, into which the ureters were drawn, as in the illustration, and the purse-string lightly tied around the tubes and reinforced by two interrupted sutures.

Dog 2.—Grayish-white bitch. Operation, January 9. Same technic as above. Both dogs are so far doing well, passing urine through the uterus and vulva.

The trial dog mentioned above was very small, with minute ureters, and consequently, very difficult to operate on, especially as the operation had not been thoroughly planned. Owing to recent pregnancy there was a great disproportion between the tubes and ureters, the caliber of tubes being many times larger than that of the ureter. In making the anastomosis, I foolishly used interrupted sutures, which made the union very imperfect. The dog died on the sixth day, urine having leaked at the anastomosis.

It is, of course, too early to report any results or give any conclusions, as the work has just begun, but the operation seems feasible, at least in dog.

1230 Sixty-Third Street.

1. Maydl: Wien. med. Wchnschr., 1894, Nos. 25-29; 1895, No. 28.
2. Pawlik: Wien. klin. Wchnschr., 1891, xli, 1814, 1815.
3. Sonnenberg: Verhandl. d. Deutsch. Gesellsch. f. Chir., 1881, vol. x, No. 11.
4. Rovsing: Hospitalstidende, 1907, xv, 709.

THE FUNCTION OF THE CHORIOID PLEXUSES OF THE CEREBRAL VENTRICLES AND ITS RELATION TO THAT OF THE PITUITARY GLAND *

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The secretory organs for the cerebrospinal fluid are the chorioid plexuses of the third, fourth and lateral ventricles. These are highly vascular projections of the pia mater into the ventricles, covered with villous-like projections about 1 to 2 mm. in diameter. Under the microscope these villi are seen to be made up of a number of secondary villi about 0.25 mm. in diameter, which again show grape-like projections. Through the center of the villi run comparatively thick-walled blood-

*Read before the Cincinnati Neurological Society, and the Cincinnati Society for Medical Research, Jan. 5, 1911.

*For reasons of space, part of the illustrations are omitted. All appear in the author's reprints.

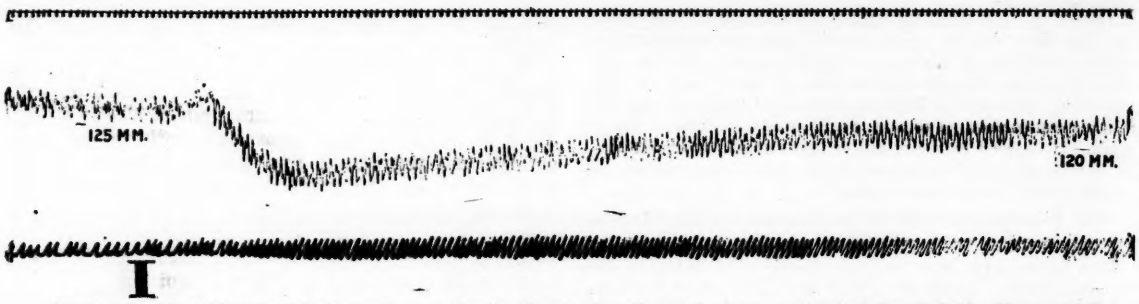

Fig. 1.—Dec. 21, 1910. Dog, 6 kilos; ether anesthesia. Jugular injection at I, of 1 c.c. extract of dog chorioid. Uppermost line, timer marking seconds; second line, blood-pressure; third line, respiration.

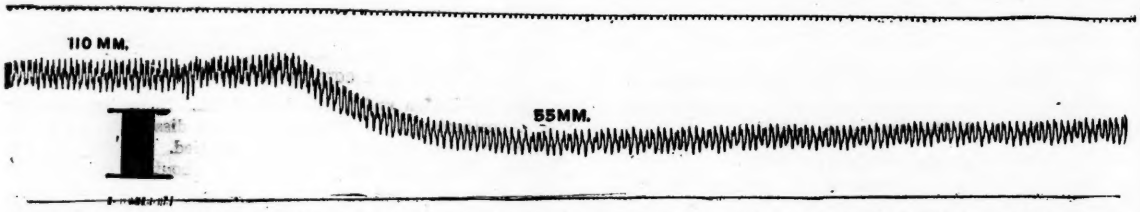

Fig. 4.—Dec. 28, 1910. Dog, 12 kilos; ether anesthesia. Jugular injection, at I, of 12 c.c. cerebrospinal fluid from a patient with cerebral edema of traumatic origin. Lines as before.

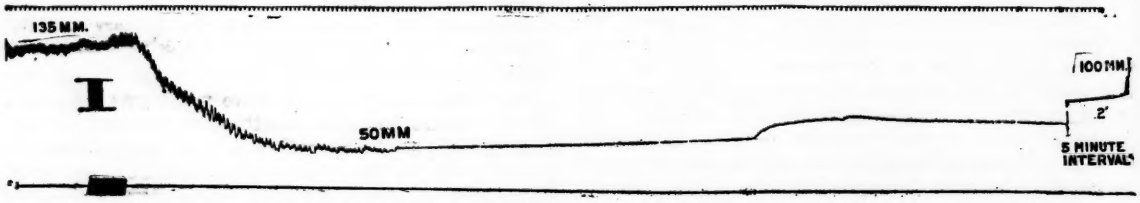

Fig. 6.—Dec. 31, 1910. Same dog as in Figure 5. Injection, at I, of 10 c.c. cerebrospinal fluid from same case (Fig. 5) of delirium tremens. Lines as before.

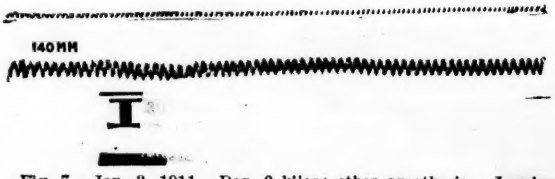

Fig. 7.—Jan. 3, 1911. Dog, 6 kilos; ether anesthesia. Jugular injection, at I, of 30 c.c. cerebrospinal fluid from an individual recovering from mild attack of delirium tremens. Lines as before.

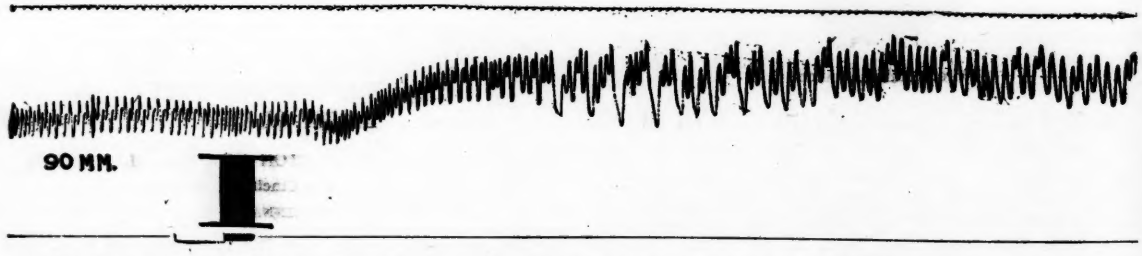

Fig. 8.—Dec. 10, 1910. Dog, 11 kilos; ether anesthesia. Jugular injection, at I, of 0.75 c.c. pituitary extract. Lines as before.

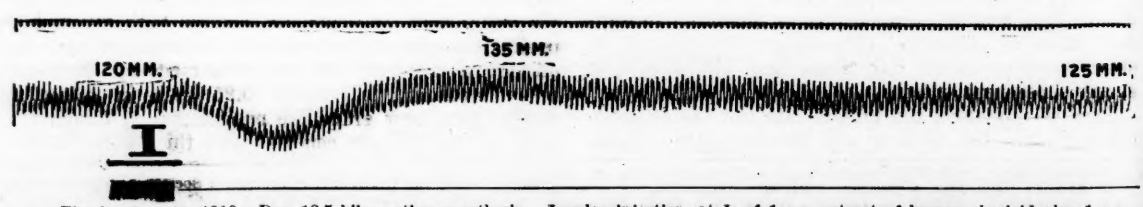

Fig. 9.—Dec. 30, 1910. Dog, 12.5 kilos; ether anesthesia. Jugular injection, at I, of 1 c.c. extract of human chorioid plus 1 c.c. of pituitary extract. Lines as before.

vessels, giving the entire organ a highly vascular appearance. The connective tissue of the villi is that of the pia mater. Covering the villi of the plexuses is a layer of large spheroidal cells, in each of which may be seen, in addition to the nucleus, yellowish granules. These cells are probably the secretory cells of the organ. The appearance of the plexuses strongly suggests an inverted gland which, instead of pouring its secretion into a series of ducts, empties directly into the ventricular system of the brain.

If one strips the chorioid plexuses from both the lateral ventricles of a dog recently killed by bleeding, and rubs them up in 2 c.c. of normal saline solution and injects the filtrate into the jugular vein of another dog, it will be found that this extract causes a marked fall in the blood-pressure. This effect was found to be constant in ten experiments.

Figure 1 is from a tracing of such an experiment. The blood-pressure was obtained by connecting the carotid or femoral artery of the animal with a mercury manometer. The respirations were recorded by means of a Paul Bert pneumograph connected with a Marey tambour, so arranged that the up-stroke represents inspiration, the down-stroke expiration. The time of injection was recorded by an electric signal. The injection was made into the jugular vein. In all experiments the animals were under light ether anesthesia administered through a tracheal tube. This animal received 1 c.c., or half the total extract made from the chorioid plexuses of the lateral ventricles of another dog killed by bleeding. The drop in blood-pressure, which in this experiment was preceded by a slight momentary rise (not constant), began fifteen seconds after the beginning of the injection, reached its maximum (that is, 50 mm.) twenty-eight seconds after the beginning of the injection, and returned to within 5 mm. of the original pressure in two minutes and twenty-five seconds. The rate of the heart-beat was apparently unchanged. The respiration was increased in rhythm from 40 to 60 per minute. Extracts made from the chorioid plexuses of the human brain show the same effects in even smaller doses.

Figure 2 is a tracing obtained by injecting into the jugular vein of a dog 1 c.c. of an extract made by rubbing up the plexus from one lateral ventricle in 10 c.c. of normal saline solution. The brain was removed from a man 35 years of age, five and one-half hours after death from pneumonia.

Extracts made from the chorioid plexus of the fourth ventricle produce the same reaction.

The reaction exhibited in Figure 3 is independent of the action of the vagus nerves, since the same effect is obtained when both vagus nerves have been divided.

The thought suggested itself that possibly in certain cerebral affections, particularly in such as were associated with hypersecretion of cerebrospinal fluid, the fluid might contain an excess of this depressant evidently secreted by the chorioid plexuses. Accordingly experiments were made with cerebrospinal fluid obtained by lumbar puncture in three such cases.

Fig. 4, continued.

Figure 4 is a tracing obtained from a dog into whose jugular vein were injected 12 c.c. of cerebrospinal fluid obtained by lumbar puncture from a patient with edema of the brain following a blow to the head producing a subtentorial hemorrhage. It will be seen that the injection caused a marked (55 mm.) and prolonged fall in blood-pressure, followed by an exceedingly slow and incomplete recovery. The cerebrospinal fluid in this case evidently contained a great excess of the "chorioid depressant."

Figure 5 is a tracing obtained from a dog into whose jugular vein were injected 5 c.c. of cerebrospinal fluid drawn from a marked case of delirium tremens. This fluid was much more depressant than that from the previous case.

The injection of 10 c.c. of the same fluid fifteen minutes later into the same dog produced a most violent and prolonged depression, from which the animal incompletely recovered only after an interval of eight minutes. This is shown in Figure 6.

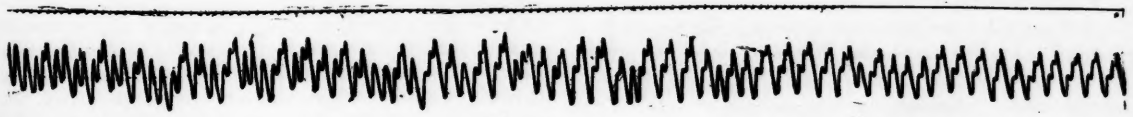

Fig. 8, continued.

Figure 7 is a tracing obtained by injecting 30 c.c. of cerebrospinal fluid drawn from a subject who had recovered from delirium tremens. There was but little depressant effect, a fall in blood-pressure of not more than 5 mm., which was quickly recovered. The individual from whom this cerebrospinal fluid was obtained had had a mild attack of delirium tremens which had lasted only forty-eight hours, and, at the time the fluid was withdrawn, the patient's pulse was normal again and the attack of delirium tremens had disappeared.

The patient died from whom the fluid used in Experiments 5 and 6 was obtained, and at autopsy a marked cerebral edema was found. The ventricles were filled with fluid which, when injected into dogs, was markedly depressant.

It also occurred to me that if such a depressant were secreted by the chorioid plexuses and poured out into the ventricular system it would meet there whatever was given off by the pituitary body, and it seemed wise to determine, if possible, what action these two principles might have on each other. As has been abundantly shown, the infundibular lobe of the pituitary gland contains a substance which causes a marked elevation in blood-pressure lasting for some time and accompanied by a marked slowing of the heart and an increase in the force of the cardiac systole.

Tracing 8 was obtained from a dog into whose jugular vein was injected 0.75 c.c. of an extract of the infundibular lobe of the sheeps' pituitary gland. The well-known effect is here nicely shown.

When an injection was made of a mixture of the pituitary extract just mentioned and an extract of the human chorioid plexus it was found that these substances tend to counteract each other, though incompletely. Of course, it is difficult to determine the completeness or incompleteness of such a counter-action in the absence of known dosage.

If we examine a tracing (Fig. 9), of such an experiment we shall find it very interesting. The depressant effect of the chorioid is shown, but lessened in amount and only transitory in time. This is succeeded by a rise in pressure due to the pituitary extract but this also is lessened in amount (15 mm.) and greatly shortened in time of duration. At the end of two minutes and thirty seconds the blood-pressure was within 5 mm. of that which obtained before the injection. The slowing of the heart is present but also reduced. It is evident then that these two principles which, we presume are poured into the cerebrospinal fluid have a tendency to counteract each other in so far as their effect on the circulatory apparatus is concerned. It will be a matter for future investigation to determine, if possible, under what circumstances the one or the other gains the supremacy.

A further report on the nature of the chorioid "depressant" will also be made in the future.

4 West Seventh Street.

OPTIMISTIC THERAPEUTICS

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Some months ago the Hon. Joseph Choate, at a celebration commemorating the landing of the Pilgrim Fathers, suggested that it might not be amiss to extol the Pilgrim Mothers also, who not only had to endure equally the hardships and privations undergone by the Pilgrim Fathers, but also had to endure the Pilgrim Fathers.

Along this line the thought has occurred to me that, while tomes have been written concerning the psychic attitude of our patients—how they should be lifted from the slough of disease and despond, and their feet planted on the solid ground of health and right thinking; how to combat the demon of introspection; how to stem the increasing tide of "Americanitis," and so on *ad infinitum*—but little has been said about the psychic attitude of the physician who has these problems to shoulder as well as the mental foibles of the sick. He has to not only bear with the disease, but also bear with the changing, the complaining, and often repining personality of "experienced invalids," who know how to run up and down the gamut of symptomatology like an expert pianist, or who can argue from obscure cause to mysterious effect like a trained advocate.

We all have them: the surgeon hears of minor injuries entailing dreadful and far-reaching consequences; the gynecologist is regaled with lurid accounts of horrible ovarian and uterine pains; the ophthalmologist or aurist is told of ringing and singing sounds in the ears, or remarkable spots before the eyes assuming all manner of fantastic shapes; the internist hears of jumping and bumping hearts, of existences eked out with one lung completely gone, and the other one nearly out of commission, or of fierce pains in the back, denoting of course serious kidney disease; while the gastro-enterologist, I imagine, hears the most bizarre recitals of all. I am told sometimes of phenomena following the ingestion of simple articles of food which are neither explainable by physiology nor pathology, and which would make Sindbad the Sailor or Baron Munchausen turn green with envy. A prosaic piece of bread or an ordinary slice of roast beef, when deposited in the alimentary tract of some of these nervous dyspeptics, immediately becomes almost endowed with life, assuming a gastronomic importance anywhere from romantic to tragic. The wholesome meat of to-day becomes the poison of to-morrow, while some now despised viand may at the next visit be a longed-for delicacy.

Scientific diagnosis is being well taught at present by practically all the medical colleges. Each institution is vying with the other in furnishing thorough laboratory and clinical instruction, so that every medical graduate who lives up to his opportunities is amply equipped to diagnose disease as it comes before him. I am also glad to observe a healthy revival in therapeutic instruction. The belief in the efficacy of many forms of therapeutics—drug and otherwise—has been much undermined by the German school of therapeutic nihilists, aided and abetted, I regret to say, by one of our most eminent American physicians, who has recently taken up his abode in England.

Etiology, pathology, morbid anatomy, and symptomatology of disease have their essential place; but what the patient is interested in is the treatment and prognosis. When I read page after page of pathology, etc., and finally find the treatment briefly and inadequately expressed in a few lines, I feel that I have asked for bread and been given a stone.

Differential diagnosis appeals to the average lay mind, even though it be an intelligent one, about as much as the anatomic difference between a dinosaurus and an anthropoid ape. The question "What is the matter with me, Doctor?" is overshadowed by the more pointed ones "How long shall I be sick?" or "Shall I get well?" and the doctor who gets busy at once doing something, whether it be an important therapeutic procedure or only a measure to relieve symptoms and render the patient more comfortable, until he can learn "where he is at," acquires an immediate influence not to be despised.

Far be it from me to decry any of the niceties of diagnosis, or the judicial poise of mind necessary to correct discrimination, where lines of diagnostic demarcation

are dimly drawn. What I do contend, however, is that it is the physician's duty, for both material and psychic reasons, to inaugurate some form of treatment as soon as possible after taking charge of a case of illness; and the patient has a right to it. Furthermore (and now I reach my subject), the therapeutics should be of an optimistic nature *to* the sufferer and *from* the physician. The confident frame of mind assumed by the medical attendant, the determination on his part to "win or bust," the abiding hope that the *vis Naturæ medicatrix,* that wonderful handmaiden, may "pull him out of the hole" regardless of the present outlook, will, more often than we realize, change a probable gloomy prognosis into a favorable one.

It is of course proper to be cautious and conservative, to preserve a loophole through which human fallibility may escape the blame, in case conditions do not assume the aspect that we anticipate. We must be ever on the *qui vive* that we allow not the plaints of some chronic complainers to render us careless as to possible underlying organic troubles, but this caution need not and should not dampen our optimism, or dull that keen edge of cheerfulness and hope with which our every prescription should be leavened.

Even in the graver maladies we should be extremely slow to give a fatal prognosis, for none of us, as yet, fully comprehend the influence of mind over matter, nor do we comprehend the influence of the higher psychic centers over the lower centers of metabolism, upward or downward. True optimistic therapeutics tends at all times toward exalting the activities of the organism, and not toward depressing them; therefore every point gained on some perhaps isolated nerve center may exert an unexpected beneficent effect on the very center responsible for the ills we are seeking to remedy.

I believe that in only the rarest and most exceptional instances, or where the patient is actually *in articulo mortis,* have we the right to shut the door of hope. Few there are whose absolute wisdom justify them in pronouncing the dictum as of a supreme court. I recently saw a picture entitled "The Death Sentence," in which was portrayed an austere physician facing a flat-chested, despairing young man. The physician had evidently informed this youth that his case was hopeless, and nothing was left but to supinely lie down and expire. Such a picture should be blotted out of existence.

Individually I would not accept the *ipse dixit* of any man or set of men that any disease, or complication or combination of diseases would place me beyond the pale of hope. And, if I so decidedly take this stand for myself and those who are near and dear to me, why should I not be fired by the same optimism and never-say-die determination in the treatment of my patients, no matter what the apparent outlook may be? The most successful politicians are those who never give up till the last ballot is counted, for a seeming defeat may, by some turn of fortune's wheel, be changed into victory at the last moment. Similarly, in a physician's work, an invincible determination to find the door to hope and to use the key, may be the deciding factor in success. I well remember an incident occurring in the career of a highly respected physician, now passed to his reward. His patient, the only son of a widow, seemed in the throes of dissolution; and this medical man informed the mother in the hearing of the son (who, by the way, was conscious), that nothing else need be done, as death was inevitable. Leaving her, with breaking heart, to close the eyes of her only support, he retired for the night in an adjoining room. On awaking six hours later, Nature having busied herself in the meanwhile, he found a remarkable change for the better, which ended in a speedy recovery. The mortal remains of that doctor now molder in the ground, while the supposedly dying young man is at this time one of the most active citizens of South Georgia, and his name is borne by a thriving town.

Can we blame some sufferers from real or imaginary ills, who, becoming discouraged under the attitude of inert pessimism assumed by some physicians, stray into the alluring arms of the various cults, which despite their ridiculous concepts, at least ring an optimistic note? What a patient comes to a doctor for is treatment. He desires it—yea, he demands it. If, therefore, we are to be capable therapeutists, alert to meet every changing manifestation of disease, watching for danger-signals, listening for every warning voice of Nature, though it be still and small, let us, I beg, not clothe our professional efforts with the somber habiliments of pessimism, nor withdraw into the gloomy caverns of therapeutic nihilism; but, imbued with a spirit of cheerful resolution, let us receive with conscientious optimism every class of disease, organic or functional, injecting a word of hope or a ray of spiritual sunshine into every prescription, into every procedure, cultivating at all times an attitude that incites both hope and courage in the invalid's breast.

If we can but add to our knowledge works, and to our works the charming garments of an unfailing optimism, verily we shall receive our reward.

Therapeutics

PERICARDITIS

Pericarditis, like inflammation of any other serous membrane, may be acute, subacute or chronic, and, like any other serous membrane inflammation, may cause a fibrinous, serous, hemorrhagic or purulent exudate, and simple serous exudate, and there may be subsequent adhesions.

Primary pericarditis is very rare. It is almost invariably a secondary condition, with rheumatism as its most frequent cause. Bright's disease (chronic interstitial nephritis), infectious fevers (including cerebrospinal meningitis), pneumonia, and tuberculosis are other prominent causes. Traumatism is also a not infrequent cause. When it occurs as a complication of acute articular rheumatism, it most frequently occurs during the second week. Some statistics have seemed to show that it occurs as frequently as once in every seven cases of articular rheumatism. This is, however, probably an exaggerated frequency, unless a slight friction or occasional cardiac pain are termed pericarditis. Pericarditis may also occur during chorea, which is probably an infection and is closely allied to rheumatism. Pericarditis next most frequently occurs as a terminal condition in the last stage of Bright's disease.

While acute pericarditis may begin insidiously and escape detection, unless the heart is frequently examined during rheumatic and other fevers, still it is not so likely to be overlooked as endocarditis, as pain, sharp and lane-

inating, is generally complained of. The pain is referred to the region of the heart and to the epigastrium. It seems to be not entirely due to the friction of the inflamed surfaces of the pericardial sac, as it may continue after a fluid exudate has separated these surfaces. There generally is a slight rise in temperature; the pulse becomes weak and small and perhaps irregular, with more or less cardiac dyspnea. There is generally from the very first a good deal of restlessness and mental anxiety, the patient reflexly or actually realizing the seriousness of the condition. In other words, there is cardiac anxiety, a condition so well understood by the physician who sees many patients with heart affections. As the disease progresses the patient desires to lie with the head higher and higher, this depending on the amount of exudate. If there is much exudate, so that the heart is much pressed on, the least exertion will cause dyspnea and cyanosis. If the exudate were very large and the pericardial sac greatly dilated, the recurrent laryngeal nerve might be so interfered with as to paralyze the vocal cords and cause aphonia. An exudate should not be allowed to become so great as to cause this condition. In other words, paracentesis should be done before such a dilatation of the upper part of the sac could occur. Even when the exudate is small, possibly from continuity, irritation of the diaphragm may occur, and a consequent hiccough becomes a troublesome and dangerous symptom. Probably reflexly, owing to disturbance of the pneumogastric nerve, nausea and vomiting are often present.

The physical signs of this inflammation are, first, to-and-fro friction fremitus; second, when there is effusion, increased cardiac dulness, absence of cardiac impulse, and muffling of cardiac sounds. The amount of exudate of course determines the size of the pear-shaped dulness.

The pathology of pericarditis is simply that of an inflammation of a serous membrane, with the addition of the physical fact that there is no opportunity for rest. The duration of the acute form varies from two to several weeks, with the exudate, if there was exudate, gradually diminishing. If the exudate was withdrawn, there may be some recurrence. The inflammation may become chronic. This is, however, rare, except as an adherent pericardium, unless pus forms and there is a purulent inflammation of the pericardium. In other words, a heart could not long stand a continued and repeated pressure from exudate, while if it is a purulent pericarditis, operation and drainage is immediately necessary.

The prognosis of pericarditis occurring during rheumatism, during acute infections, or from injury, is generally considered good, patients not frequently dying of this condition alone, although it is a serious complication if the patient is otherwise seriously ill. However, patients with fibrinous pericarditis may develop myocarditis and later acute dilatation. Sometimes after the patient is apparently well, adventitious sounds may be heard in the region of the apex, which are due to adhesions in the pericardium. Also, sometimes these sounds are heard at the base of the heart. Such sounds show adhesions that interfere with perfect cardiac action, and under exertion or sudden heart-strain may cause sudden death. When pericarditis occurs during an acute exacerbation of nephritis, especially chronic interstitial nephritis, the prognosis is bad. It is generally a terminal condition. It should not be forgotten that when there is a large exudate in the pericardial cavity sudden death from overwhelming of the heart may occur at any time during the course of the disease.

The indications for treatment are:

1. To treat the underlying cause of the inflammation.
2. To relieve pain.
3. To inhibit the progress of the disease and prevent exudate if possible.
4. To quiet the heart.
5. To remove the exudate, medicinally if possible, surgically if the amount is at all large.

1. If the cause of the pericarditis is rheumatism, salicylic acid in some form should be continued unless it has been proved in this particular patient not to inhibit or control the disease. Alkalies, best in the form of sodium bicarbonate and potassium citrate, should be administered in full doses, so that the urine is distinctly alkaline. If the pericarditis is caused by some infection, whatever is necessary to treat the infection properly should be continued, with perhaps the addition of the above alkalies, as it should be remembered that whenever a patient is seriously ill, and but little or insufficient food is taken, or if there is much vomiting, and especially when there is nephritis, there is increased acidity of the body tissues and a decreased alkalinity of the blood readily occurs; in other words, acidosis is always imminent and is probably the final cause of many deaths.

2. Pain must be absolutely stopped with sufficient morphin. There can be no question of the seriousness of pain in this region and from this cause. With the stopping of the pain the heart is slowed and quieted, the nervous restlessness and anxiety is lessened, and the patient may obtain quiet, restful sleep, which is absolutely essential for the condition to improve.

If there is salicylism from the salicylates which it seems best or necessary to administer, it is well to reduce the amount, as it would take more morphin to cause sleep if the cerebrum is thus excited. While pain is in evidence and morphin is necessary, the amount of food administered should be very small, as it will not digest when the patient is under the influence of morphin.

Fortunately, this pain will generally be mostly relieved when the exudate occurs, if it is to occur. The repetition of the morphin should be according to the amount or continuance of the pain. The morphin should, of course, be stopped the moment the pain is abated.

The pain having ceased and morphin not being longer necessary, the patient should receive the diet that is the best for the disease which caused the pericarditis, with the exception that food should be given frequently and in small amount, as any distention of the stomach, which is likely to cause more cardiac dyspnea, should be avoided. Any particular food that causes gastric flatulence should also be avoided. The bowels should be moved by the drug and method found easiest and best.

3. The best treatment to inhibit the inflammation and possibly prevent exudate is the local application of the ice-bag or cold coil. If tolerated for the first hour, the patient will often not object to the cold, and if it quiets the heart, as it generally does, the application is grateful rather than objectionable. The cold rubber should not be directly applied to the skin, but should be separated from it by two layers of an ordinary handkerchief. A towel is generally too thick. The bag should not be so full as to be too weighty, and it is well to suspend it from some sort of a cradle so that the whole

weight will not press on the heart. Young children will often, of course, not tolerate the cold. There is no question that moist warmth will often relieve the local pain, and whether or not it will increase the tendency to exudate is undecided. Theoretically it is best avoided. Moist heat, however, is probably better than dry heat, as tending more to relax the surrounding surface circulation.

If an exudate occurs, the advisability of small fly-blisters must be considered. Simple counter-irritation from mustard often seems to be of benefit, but the fly-blister is much more valuable. They should not be large, and are perhaps well placed at the border of the heart rather than directly over it. Small blisters on different parts of the border-line of the cardiac dulness may be used on different days. Cantharides is, of course, the best blistering medicament, but should not be used if nephritis is present.

4. This indication is met by absolute rest and quiet in the position found most comfortable for the patient. Every movement of the patient must be slow; no movement must be quick. He must not be allowed to see anyone but his immediate attendants; he should not be allowed to talk, except concerning his immediate needs. The more he comfortably sleeps, the better, all of these factors tending to decrease the frequency of the heart-beats, and the less the frequency the less the irritation.

If the salicylates are not given, or the condition is not caused by rheumatism, and the heart is not weak, and the pulse is strong, aconite for twenty-four hours, to quiet the heart, may be given, unless the local ice treatment quiets the heart sufficiently. If it is necessary to give the patient a hypnotic such as chloral or one of the synthetic hypnotics, the aconite should not be given, as these drugs will quiet the heart. Unless there has been a prolonged infection which could have caused a myocarditis besides the pericarditis, the heart will not stop on account of lack of inherent strength, but may stop on account of the pressure from an exudate. Therefore, myocardial weakness need not ordinarily be feared, although in children, especially, sudden dilatation may occur.

If the pulse is weak, irregular, and perhaps intermittent, and degeneration of the heart muscle from prolonged infection or illness is not present, digitalis will be of great benefit. It will strengthen the individual beats and reduce the frequency. If the number of beats, by any method, is reduced twenty per minute, this would mean 1,200 beats less an hour, or 28,800 less in twenty-four hours. If the number of beats were reduced only half this amount, the value can easily be seen to be enormous. If digitalis is used, the dose should not be large, perhaps five drops of an assayed fat-free tincture once in six to eight hours.

5. Whether or not an exudate may be diminished and removed by medicinal treatment is a question that may be decided within a few days. Strenuous efforts to remove liquid from the body to prevent this serous exudate could probably not be inaugurated on account of the underlying sickness or cause of the pericarditis. Much purging is out of the question on account of its weakening effects. Profuse diaphoresis is generally totally out of the question. The efficiency of diuretics is always doubtful. The administration of potassium citrate and bicarbonate of soda, above suggested, will probably cause some diuresis. If digitalis is deemed advisable, it will doubtless cause more. The amount of liquid taken into the system should be somewhat restricted. It is possible that by these measures the amount of exudate may be limited and the exudate already present may become gradually absorbed. The local blisters above described also seem to cause resorption of the fluid.

Whether or not the exudate must be immediately removed depends not so much on its bulk as on the amount of dyspnea or cardiac distress that it is causing. Some patients tolerate a larger amount of exudate than others. It is well for an exploratory puncture to be made first to decide the character of the fluid in the pericardium. This will determine the size of the aspirating needle that is necessary. Perhaps the most frequently recommended point of puncture is in the fourth or fifth intercostal space, about an inch to the left of the sternal margin. Others advise doing paracentesis exactly in the region of the normal apex beat. The patient during this operation should lie down as nearly flat as he can. The fluid should be withdrawn very slowly and the pulse carefully watched. If the exploratory needle discovers pus, and there is great dyspnea, a larger aspirating needle should be inserted than for a simple serous exudate, and some of the pus withdrawn. A second more radical surgical procedure, of course, must take place as soon as possible.

If there is a sudden attack of dyspnea, and the heart seems about to fail, venesection has been recommended and done, and it is certainly justifiable. Strychnin may be used in a dose not exceeding 0.02 gm. (1/30 of a grain) once in six hours, hypodermatically, if deemed advisable, often with advantage. Too much strychnin, with dire results, has often been used in cardiac failure. It should not be used early in the disease, as excitation of the nervous system and the heart should be avoided. If the heart seems to be failing, intramuscular injections of an aseptic ergot in a dose of one ampule once in six hours, or two ampules at once in an emergency, often is the best possible heart treatment.

When the exudate has nearly disappeared and the acute inflammation seems over, there are doubtless considerable amounts of fibrin still in the bottom or in other parts of the pericardial sac, and as there is still the general belief that an iodid will aid in resorbing such kinds of exudates, it is good treatment to give a small dose of iodid three times a day, after meals. The best form is the sodium iodid, in small doses, not more than 0.20 gm. (3 grains).

As soon as there is slight improvement, the nutrition should be pushed carefully but surely, as the better the nutrition the more complete will be the resorption of the exudate. If during the active inflammation the patient can take but little nourishment, egg albumin must be given in considerable quantities, and if it is feared that the patient is failing from lack of nutrition, there should be no hesitation in giving a teaspoonful of brandy or whisky, properly diluted, once in three hours. This small amount will rarely increase the frequency of the heart beat, and will furnish something for the nutrition. Alcohol is not advisable and it is not necessary as a medicament in this disease, but it may be necessary to tide over a period of defective nutrition.

The convalescence of an acute pericarditis should be slow and careful. The longer before the heart is allowed to do extra work, the more complete is the removal of the fibrin, and the less likely that dangerous adhesions will form.

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SATURDAY, JANUARY 28, 1911

UNCINARIASIS IN THE MINES OF CALIFORNIA

In this issue appears an important article by Dr. Herbert Gunn, who reports that hookworm disease is found in 50 to 80 per cent. of the miners working in certain mines in California, and that the infection is present in Nevada mines also. This article is especially timely just now, when certain organizations interested in mining are making arrangements for an investigation as to the presence and prevalence of hookworm disease among American miners.

As early as 1902, Dr. Charles Wardell Stiles of the Public Health and Marine-Hospital Service determined that the infection was present among the copper-miners of the Virgilina district, the coal-miners of the Cumnock district, and in the region of the Haile gold-mines. In 1904 Wainwright and Nichols[1] examined 400 anthracite miners selected from fifteen different mines in Pennsylvania, and found one case of the infection. Since the discovery of the wide-spread distribution of hookworm disease in the United States, the men engaged in this investigation have repeatedly brought forward the point in their public addresses that, while in general the Potomac and Ohio Rivers may be looked on as the northern border of the endemic infection, we must be prepared to find cases farther north, more especially in our mines, and that unless rigid rules in mine sanitation are enforced, there is danger that at any time the hookworm problem in our American mines may become as important as in the mines of Europe. Considering the large numbers of southern negroes employed in some mines and the large numbers of immigrants from Europe in others, it seems strange indeed that the disease has not already been reported more frequently among American miners. The data now accessible call for a prompt and rigid investigation into the subject in all mining localities of the country.

If the experience of other countries be taken as a criterion, the indications are that in northern mining localities the infection will be found chiefly among the men who work underground, and relatively much less frequently among the women and children of the districts in question. In this respect, the age and sex distribution may be expected to differ from that noticed in the warmer agricultural regions.

So far as it is possible to prophesy at present, it seems probable that, in the greater part of the north, the European immigrants and the southern miners who go north will be the chief elements who will spread the infection, while in the far west the Asiatics must be held in mind as possible contributing factors. In all probability many of the hookworm cases which will be found among our miners in the North will be found due to the Old-World hookworm (*Ankylostoma duodenale*).

It is especially the humanitarian side of this question which interests us. At the same time, the economic side is one which we cannot afford to ignore. Gunn's estimate, therefore, that in one California mine the loss due to the infection is over $20,000 per year is worthy the attention of mine-owners. Let us not forget that it has already cost European mines hundreds of thousands of dollars to institute a campaign against this disease. The situation for the American mines was summarized[2] in 1907, as follows: "Whether the American coal-mines will experience a repetition of the sad and expensive history European mines have had from hookworm disease, will depend primarily on the sanitary regulations they enforce." It might be well for mine-owners to consider this warning, in connection with the statement by Wainwright and Nichols that "none of the anthracite mines of this country. . . has any privy facilities under ground. The men deposit their excreta in any chamber or gangway handy."

Until recently the Public Health and Marine-Hospital Service seemed to be the only federal bureau which really grasped the significance of the hookworm situation in this country, although the Medical Corps of the U. S. Army, because of the important work by Dr. B. K. Ashford, had for some years pointed out the importance of the disease in Porto Rico, and Ashford and King had made heroic efforts for its suppression on the island. About two years ago, the Bureau of Labor became interested in the problem, and it is reported that the present Commissioner of Labor, Mr. Neill, is thoroughly aroused to its importance. It is now reported also that the newly established Bureau of Mines is turning its serious consideration to the subject. The southern state boards of health have been doing most praiseworthy and efficient work in the campaign, and during this last year the educational interests have taken up the subject and are cooperating in a manner that is deserving of the highest praise.

Up to the present the agricultural organizations of the country in general, with some few exceptions, notably two southern agricultural journals, have not become aroused to the importance of hookworm disease on the farms, and statistics recently published, to the effect that a census of over 4,800 American farm homes shows

1. Med. News, April 23, 1904.

2. In Osler's Modern Medicine, i, 592.

that less than one-half of them are provided with a privy of any sort, should arouse our agricultural stations, bureaus, societies, etc., to immediate interest and action.

FERMENT ACTION IN PATHOLOGIC PROCESSES

That vital activity, in the broadest sense of the term, is most intimately associated with enzyme action, is a matter of common acceptation. In view of this, the investigation of the part played by ferments in pathologic processes has become of no small significance. In a recent article, Wohlgemuth[1] outlines the general progress that has been made in this direction. To review in detail the great amount of valuable work being done on this subject, both here and abroad, would be impossible at this time, and the present review is based solely on the account just cited. Practically only the borderland of this enormous field has been entered, and yet results have been obtained that indicate unmistakably the value of further work.

As would be expected *a priori,* different ferments occur in different tissues in varying proportions. So, for instance, oxidase appears to occur in proportion to the presence in a tissue of polynuclear leukocytes or their decomposition products. But whatever the tissue, one enzyme at least seems to be invariably present—the autolytic ferment. Enzymes other than those inherent in the tissue cells themselves not infrequently play a part in self-digestion, however. Thus, the autolysis in the pneumonic lung is greatly accelerated by the presence of the so-called leukocytic ferment, a proteolytic ferment limited apparently to the polynuclear leukocytes. The importance of such a ferment becomes at once evident when we consider the share it must take, for example, in such processes as the resolution of pneumonia or the absorption of fibrinous exudates. Non-contaminated tuberculous abscesses, characterized by infiltration with lymphocytes, do not possess such a ferment, until an immigration of polynuclear cells is induced, as by an irritant paste, and it is probably in this direction that the explanation of the therapeutic value of the latter is to be found. This leukocytic ferment is believed by Wohlgemuth to be the source of the great variation in the post-mortem clotting of blood. Of the three factors chiefly concerned—thrombogen, thrombokinase and fibrinogen—delayed clotting has been found to be mainly due to absence of the last. And Wohlgemuth believes that it is the proteolytic ferment liberated from decomposed leukocytes that causes disappearance of the fibrinogen. In this connection, the contradictory fact is of interest that in pneumonia, eminently a disease characterized by leukocytosis, we usually have a markedly increased coagulability of the blood.

Accelerated autolysis may result in other ways as well, as in such conditions as phosphorus poisoning and acute yellow atrophy. So, too, it is believed, though on uncertain evidence, that the shrinking of the puerperal uterus is of this character. Malignant tumors for the most part show the phenomenon in a marked degree, possessing also the property of hastening autolysis of the normal tissue, frequently with the production of abnormal cleavage products.

On the other hand, tumor cells may lack ferments present in normal cells, and may even produce changes in the enzyme content of normal cells of their host. So it has been found that at times the demonstrated ability of normal liver cells to digest carcinomatous tissue may disappear. Serum, also, which normally has a lytic action on carcinoma cells, may lose this in carcinomatous individuals—a phenomenon which throws light on the problem of hetero-inoculation and auto-inoculation of malignant growths.

Some attempts, only partially successful, have been made to simulate the abnormal ferment action of malignant growths. Particularly has this been done with melanosarcoma, and melanin-like substances have been produced in several ways—by the action of both vegetable ferments and of melanoma extracts on tyrosin and epinephrin. Inasmuch as little is known of the composition of melanin itself, such attempts must necessarily be inconclusive. The addition of the vegetable ferments to the inoculable sarcoma of mice has been found to cause pigmentation, though atypical in distribution, of the tumors *in vitro,* but not in the living animal.

Fat necrosis (in reality necrosis of tissue with fat-splitting)—the peculiar lesion produced by the escape of the juice of the pancreas into adjacent structures—has commonly been held to be the result of backing up of bile or of duodenal secretion into the pancreatic duct, with resultant activation of the pancreatic proferments and digestion of neighboring tissues. Since such necrosis often occurs at the tail of the pancreas, the portion which would be the last to be reached by an influx of intestinal secretion through the duct, this theory scarcely suffices. It has recently been found that the amino-acids resulting from proteid decomposition may produce activation of the secretions; so that slight local inflammatory processes, with subsequent autolysis, may be the true source of the activation and abnormal action of the secretion.

1. Wohlgemuth: Berl. klin. Wchnschr., 1910, xlvii, 2182.

EXCEPTIONAL MEN AND HIGHER STANDARDS OF MEDICAL EDUCATION

In the discussion of educational standards, references are frequently made to physicians who have reached distinction, although they received their education at a time when lower standards prevailed. It is sometimes argued that the adoption of higher standards of preliminary education would prevent such men from studying medicine. Such exceptional men, however, were almost bound to succeed under any circumstances, and the fact is apparently overlooked that probably they succeeded

in spite of their inferior advantages. How many more physicians of such marked success would there be, it may be asked, had the medical colleges of twenty or more years ago held to higher standards of admission and possessed better teachers, better-equipped laboratories and more ample clinical facilities? Even so, however, the graduate in medicine of twenty years ago was not so heavily handicapped as the graduate of to-day with the same inferior equipment, for the disparity between their attainments and the summit of medical knowledge was far less twenty years ago than it is to-day. Of course, at that time, the preliminary requirements which are exacted to-day were not necessary—scarcely possible.

Those who question the value of a thorough preliminary education apparently fail to see that, after all, formal education is largely a device for saving time and labor, and that, as the volume of knowledge increases, the difficulty of mastering it increases likewise until the aid of such educational devices becomes indispensable. Mathematical knowledge, for instance, was scanty in Pythagoras' day; he spent the years of his mature life laboriously constructing and arranging the mathematical arguments which the modern schoolboy is expected to learn in a few months; and he gained his reputation as a mathematician without having heard of logarithms. No one to-day can attain even respectable mediocrity in mathematics, or any other science, without mastering more knowledge than the world once contained on that subject. Pythagoras and Euclid, if they were living to-day and were still without a modern mathematical education, would be no better qualified to cope with modern mathematics than the Chaldean astronomers would be to pass on the work of Newton and Herschel. And likewise, no one can now be considered passably well informed who is not acquainted with a range of subjects undreamed of by the intellectual giants of other days.

It seems scarcely more than yesterday that the very names of many of the sciences which to-day are subsidiary or auxiliary to medicine were unknown. There is no alternative: those who would keep abreast of the times must start on the journey equipped with the condensed experience of their predecessors; they must start as nearly as possible where their predecessors left off. It is a cruelty rather than a kindness, even to the students themselves, to foster the idea that the educational standards of yesterday are sufficient for to-day.

Incidentally, the requirement of higher preliminary standards to-day is not unreasonable, since there has been a corresponding increase in the opportunities for obtaining this higher training. Instead of hindering men of true worth from entering on the study of medicine, insistence on higher standards will have the most desirable result of weeding out the ignorant and unqualified, and of bringing about a higher degree of competency in the rank and file of the medical profession. With the present abundant oversupply of physicians, any reduction in the number resulting from higher educational standards will not be a serious matter, either for the public or the profession itself. At the same time, the number of well-trained and competent physicians will be materially increased. Clearly, the interests of the public, of the profession, and of individual practitioners will be best conserved by the adoption of higher standards in medical education.

Current Comment

AN INTERESTING BULLETIN ON STATE HYGIENE AND PROPHYLAXIS OF DISEASE

The Bulletin of the Ohio State Board of Health for the last quarter of 1910 contains seventeen papers presented at the conferences of village and township boards of health held at Cleveland in June and at Cincinnati in October. Such subjects are included as the control of contagious and infectious diseases, disease-carriers, facts and fallacies regarding the transmission of infectious diseases, a number of papers on typhoid fever and its prevention and management from the standpoint of the sanitarian, several papers on milk and its production, a paper on sanitation in villages without sewers, on school inspection, on abatement of nuisances, and others, and a report of contagious and infectious diseases. There are seldom gathered together in one pamphlet so many valuable papers on the important subjects of public health and sanitation as in this one. The several papers afford an almost complete program for the municipal health officer covering the prevention, control and eradication of infectious and communicable diseases.

REFORM IN ADVERTISING

While pharmacy is a profession, economic conditions, to a large extent, have made a tradesman of the owner of a drugstore. As such he is obliged to sell many things which, in view of his professional training, he knows the public would be better off without. In the same way, the drug journals advertise many things which the editor knows to be valueless or worse. Further, the editor must conduct his reading pages in such a way as not to give offense to his advertising patrons. Thus, while editors of drug journals like to talk about the ethics of pharmacy and are prone to indulge in glittering generalities as to the need of pharmaceutic advance, these editors have as a rule carefully refrained from noting the exposures of fraudulent medicines that have appeared in the columns of THE JOURNAL—exposures that supplied information which the pharmacist should have and must have if he is to be true to his profession; information that would enable him to protect the public, the physician and himself from the harm which ensues from the use of dishonest medicines. While thus, in general, drug journals have done little to spread THE JOURNAL'S propaganda for reform, there have been two notable exceptions—the *Druggists Circular* of New York and the *American Journal of Pharmacy* of Philadelphia. These

journals have not only kept their reading pages up to date, but they have kept their advertising pages practically free from all objectionable matter. We believe that, through the work initiated by THE JOURNAL, assisted by such drug journals as those mentioned, the nostrum-makers have been put on the retreat, and that the business will continue to be a dwindling one. Other pharmaceutic journals will not lose in the long run, even from a purely commercial standpoint, by taking the position assumed by the *Druggists Circular* and the *American Journal of Pharmacy*. In fact, we confidently expect them, one by one, to adopt the same policy. By so doing they will not only gain the respect of their own profession and of the medical profession, but—equally important—they will also be able to respect themselves.

THE POOR BOY AND MEDICAL EDUCATION

Much ostensible sympathy has been lavished on the poor boy who wants to get a medical education; and it would appear that the "poor boy's" chances are going to be slimmer still if the low standard or the night colleges cease to exist. Poor boy! Of course there is some basis for these arguments in the case of students who are poor in scholarship. Such students, however, have no place in modern medicine. The arguments are not only untrue regarding students of limited means, however, but they are also unfair to those students. As a rule, the student of limited means who is ambitious and energetic enough to work his way through college is the one who knows and seeks the best—who best knows the value of a good training as well as the value of money. This is evidenced by the fact that in our best medical colleges are many students who are not only working for most or all their expenses but who at the same time are attaining a high standard of scholarship. As a rule, these students do not need sympathy, but do arouse admiration. The only need of sympathy is for the occasional energetic, deserving student who is misled by the shrewdly worded announcement of some inferior college which not only provides him with an inferior medical training, but which may actually charge him larger fees[1] than he would have to pay in a first-class medical school. As a matter of fact the opportunities for the energetic student of limited means in high-grade medical schools were never so great as at the present time. Not only has a greater demand for student help been developed in our universities through the use of stenography, the typewriter, the mimeograph, and the like, as well as through the development of university printing plants and other modern activities, but also a larger number of scholarships are available for energetic students. Of more importance, probably, is the fact that for graduates of first-class medical colleges the chances for obtaining internships in good hospitals are rapidly increasing, and by this means even the student of limited finances may round out and complete his medical training. The student of limited means—the "poor boy"—will find that it is possible for him to get the best, and that the best pays.

1. THE JOURNAL A. M. A., Aug. 20, 1910, p. 695.

UNITED STATES PUBLIC HEALTH SERVICE

Elsewhere in this issue[1] we print the bill recently introduced into both the House of Representatives and the Senate; in the former by Mr. Mann of Illinois, and in the latter by Senator Martin of Virginia. As will be noticed, this bill contains three provisions; the first, to change the title of the United States Public Health and Marine-Hospital Service; the second, to enlarge the functions of this service; and the third, to increase the salary of its officers. No one will deny the desirability of all three of these provisions. The only question is whether or not the passage of this bill will prevent further legislation, looking to a national department of health, or at least an independent bureau. The first provision would be the second step in eliminating the words "Marine-Hospital" from the title. Until 1902 the title was the "Marine-Hospital Service"; in that year a measure was passed which changed the title to the present one. If the present bill passes, the title will thereafter be the "United States Public Health Service." In the second place, the bill contains a provision to enlarge the functions by giving the service the authority to investigate "diseases of man" and the conditions that cause the spread of such disease, including sanitation and sewage, and the pollution, "either directly or indirectly," of all navigable streams or lakes. At the present time the service can investigate only certain contagious diseases and has no authority to investigate navigable waters. To the third provision, that to increase the salary of the officers, there can be no objection. In practically all the other departments of the government, the salary of the medical officers has been increased, and for several years attempts have been made to increase the salary of the men in this service, but without avail. Whatever may be the fate of this bill, continued efforts should be made in the way of constructive legislation, looking to a national department of health; we should stop at nothing short of this.

THE AUTOMOBILE NUMBER

The Fourth Annual Automobile Number of THE JOURNAL will be issued early in the spring. Numerous inquiries concerning it indicate that this year, as before, it will be warmly greeted. In the process of evolution, the automobile has become such an essential part of the business equipment of the active practitioner, and such a satisfactory means of recreation for one possessed of the necessary means and leisure, that the extensive discussion of previous years as to whether or not the physician should use a motor car will no longer be necessary. Furthermore, the previous automobile numbers are still available for consultation. That they are thus used is evident from the orders continually received for them and for the little folder giving the names of the cars. Space in the coming automobile number, therefore, can be used more appropriately for the discussion of roads, accessories, garages, tires and various other items of equipment, the proper care of the car, interesting, humorous—and sad—experiences,

1. Department of Medical Economics, page 293.

and other appropriate talk of the road. The question of upkeep is especially of importance; methods of reducing expenses are of vital interest. All owners of automobiles should keep itemized accounts of outlay; few do. It would be interesting to hear from some of the "few" as to the best method of keeping tab on what was once an expensive luxury but has now become an expensive necessity. As before, this will be an illustrated number, and sharp, clear pictures are desired to add to the interest and value. These may portray, not merely the car, but the physician also, with perhaps his house or garage, a sample road, the county hospital, etc., in the background, or else some interesting complication or difficult situation. Drawings of home-made devices, mechanical aids, garage plans, etc., are worth reproducing. Unless otherwise specially arranged by correspondence, manuscripts and photographs ought to be received during February; but in order to enable us to plan for the issue intelligently, all who intend to offer pictures or articles or both are asked to notify us by February 10.

PREVENTIVE MEDICINE AT WASHINGTON UNIVERSITY

Since the future progress in medicine will doubtless be more along the line of preventing than of curing diseases, the recent action of Washington University, St. Louis, in creating a special chair in preventive medicine is both important and timely. Not only is it intended to give the usual didactic courses in this subject, but special clinics and special research courses will be conducted. At these clinics patients having infectious diseases, diseases due to social conditions, occupations, nutritional causes and the like, will be shown. Particular attention will be given to the etiology and the means of preventing such ailments. Of greater significance, however, is the fact that Dr. David L. Edsall, Professor of Medicine in the University of Pennsylvania, has been selected for this special chair in preventive medicine. Washington University is probably the first institution which has given such marked recognition to this subject. If the old adage is correct, an ounce of instruction along this particular line will be more productive of good than a pound of work along curative lines; and concentrated, well-directed effort in the study and teaching of preventive measures should bring excellent results. Meanwhile, the establishment of this special chair on so generous a plan is another proof of the determination of Washington University to build up in the middle west a medical school fully equipped to teach medicine along modern lines.

Tendon Transference in Poliomyelitis.—Tendon transference has failed in many hands because the mechanism of the condition has not been thoroughly understood. In the first place, the transferred muscle must be a strong, healthy muscle, and no attempt should be made to use one that is paretic even to a slight degree; secondly, the tendon must be made to parallel for a considerable distance the tendon for which it will in future act; thirdly, it must tunnel the subcutaneous fat, so that no adhesions will form.—W. G. Campbell, in *Memphis Medical Monthly*

Medical News

ARIZONA

State Association Meeting.—The next annual meeting of the Arizona Medical Association will be held in Los Angeles, Cal., June 26. All of the business of the House of Delegates will be finished that day. The oration and a few papers will be read before the general meeting. The association will then adjourn to attend the meeting of the different sections of the American Medical Association. The annual banquet of the association will be held on the same evening.

County Society Meeting.—At the annual meeting of Cochise County Medical Association, held in Bisbee, January 7, the following officers were elected: president, Dr. Morris D. Cohen, Bisbee; vice-presidents, Drs. Harry A. Reese, Douglas, and Lucien L. Miner, Bisbee, and Lynn Tuttle, Douglas; secretary-treasurer, Dr. Thomas Watkins, Bisbee; censors, Drs. George A. Bridge, Bisbee, and Edward W. Adamson, Douglas; and delegate to the state association, Dr. Francis E. Shine, Bisbee.

CALIFORNIA

Election.—At the annual meeting of the Los Angeles County Medical Association, the following officers were elected: president, Dr. W. Jarvis Barlow; vice-president, Dr. Orville O. Witherbee; secretary-treasurer, Dr. George H. Kress; and councilors at large, Drs. H. Bert Ellis, William W. Richardson and Albert Soiland, all of Los Angeles.

Preparation for the A. M. A. Meeting.—It is announced that thus far Pasadena has made the best comparative showing in raising funds for the annual session of the A. M. A. next June. Extensive arrangements are planned for the entertainment of the visiting physicians and their families, including a trip to Catalina Island.——The directors of the Board of Trade of Pasadena have authorized the appointment of a committee of three to have in charge the entertainment of the American Medical Association at its meeting in Los Angeles in June.

ILLINOIS

State Sanatorium Bill Introduced.—Senator Glackin has introduced into the senate a bill appropriating $300,000 for a state sanatorium for tuberculosis.

"Helper of Mankind" Sentenced.—Julius Sefler, posing as a "Helper of Mankind," who uses the same kind of medicine for various ailments, passing his hands over the forehead and along the neck of his victims, is said to have been found guilty by a jury in the municipal court, Chicago, of practicing medicine without a license, and fined $100 and costs.

Elgin Hospital Charges Unfounded.—According to the report of Hon. A. L. Bowen, executive secretary of the State Charitable Commission, and Dr. J. L. Greene, alienist of the State Board of Administration, charges published in one of the Chicago daily papers, January 7, that a patient at the Elgin State Hospital had been beaten by the attendants, were without foundation. The investigation of the charges was made at the request of State's Attorney Dady of Lake County and was conducted in the presence of the patient's wife and the state's attorney, by the two officers above named. As stated, after a thorough investigation and physical examination, the charges were declared by State's Attorney Dady to be unwarranted and entirely unfounded, concurring in every respect with the opinions of Dr. Greene and Secretary Bowen. The wife of the patient also agreed to this finding, and refused to have her husband removed to the Kankakee State Hospital, preferring to have him remain at Elgin. The management of the institution under Dr. Sidney D. Wilgus was praised by State's Attorney Dady, who said it was as good as could be expected under all the surrounding conditions.

Chicago

Gift to Hospital.—The Maimonides-Kosher Hospital received a gift of $10,000, January 16, from Abraham Slimmer of Waverly, Iowa.

Schools Named after Physicians.—In addition to the Nicholas Senn high school, the site for which has been secured, Chicago schools are named after the following physicians: Daniel Brainard, William H. Byford, Nathan Smith Davis and Charles Warrington Earle.

Ophthalmologists Hold Meeting.—At the annual meeting of the Chicago Ophthalmological Society, held January 16, Dr. Harry W. Woodruff, Joliet, was elected president; Dr. Edwin V. L. Brown, vice-president; Dr. Willis O. Nance, secretary; and Dr. Thomas A. Woodruff, councilor.

New Tuberculosis Dispensary Opened.—The work of the Municipal Tuberculosis Dispensary is to be extended to negro residents of the city. At a meeting of the directors, January 11, it was decided to open a clinic for tuberculosis at Provident Hospital, West Thirty-Sixth and Dearborn Streets.

Personal.—A reception and banquet, in honor of the eightieth birthday anniversary of Dr. Nils T. Quales, was given January 17. A silver loving-cup was presented to Dr. Quales by Chicago Norwegians.——Dr. Matthew Karasek has been appointed temporary medical superintendent of the Iroquois Memorial Hospital, pending the permanent appointment by the Civil Service Commission.——Dr. and Mrs. Philip Frank Shaffner sail for Europe, January 28.

Work of the Winfield Sanatorium.—The record of the first two years' work of the Chicago-Winfield Tuberculosis Sanatorium, thirty miles from Chicago, conducted under the auspices of the Associated Jewish Charities of Chicago, a nonsectarian institution for the treatment of curable cases of pulmonary tuberculosis, shows that since the opening of the institution 224 patients have been admitted, forty-six of whom were children. Of these, 164 had been discharged up to Jan. 1, 1911, and sixty were at the institution on that date. Of the 164 discharged patients, 101 were in the incipient state of the disease on admission, forty-two moderately advanced state, and one far advanced. At the time of the discharge, in 82 per cent. of the incipient cases, the patients were apparently cured or the progress of the disease was arrested, and in eighteen improvement had taken place. Of the moderately advanced patients, in 52 per cent. the disease was arrested or apparently cured, 38 per cent. were improved, and 10 per cent. unimproved. The one patient in the far advanced stage is reported to be improved. Of the discharged incipient patients 94 per cent. have full or partial working capacity at present. Of those in the moderately advanced stage of the disease, 69 per cent. have at present full or partial working capacity, making a total of 86 per cent. of the discharged whose capacity for work is either full or partial. The sanatorium, which at first had a capacity of only twenty patients, now can accommodate sixty-eight, and this is shortly to be increased.

KANSAS

Medical School Located.—By unanimous vote of the regents of the state university, Kansas City has been selected as the proper site for the State Clinical Hospital and School of Medicine. The legislature will be asked to appropriate $150,000 for the school, of which $50,000 is to be applied to building a medical college and $100,000 for the erection of a hospital. The site must finally be decided by the legislature.

Elections.—Reno County Medical Society, at its annual meeting, held in Hutchinson, elected Dr. Charles S. Evans, president; Dr. Harry H. Heylmun, vice-president; Dr. John W. Young, secretary; Dr. William F. Schoor, treasurer, and Dr. M. Claude Roberts, censor, all of Hutchinson.——Wyandotte County Medical Society has elected the following officers: president, Dr. James W. May; secretary, Dr. J. Albert Fulton, and treasurer, Dr. Anna Roberts, all of Kansas City.——Montgomery County Medical Association met at Independence, recently and elected Dr. George McK. Seacat, Cherryvale, president; Dr. Joel N. Strawn, Elk City, vice-president, and Dr. James A. Pinkston, Independence, secretary.——At the seventh annual meeting of Bourbon County Medical Society, held in Fort Scott, Dr. Charles A. Van Velzer, Fort Scott, was elected president; Dr. James S. Cummings, Bronson, vice-president; Dr. John D. Hunter, Fort Scott, secretary, and Dr. Charles F. Harrar, Fort Scott, treasurer.——Douglas County Medical Society, at its annual meeting, held in Lawrence, January 10, elected Dr. George W. Jones, president; Dr. Harry L. Chambers, vice-president; Dr. Leon Matassarin, secretary, and Dr. Eugene Smith, treasurer, all of Lawrence.——At the annual meeting of Leavenworth County Medical Society, January 9, the following officers were elected: Dr. Harley J. Stacey, president; Dr. Charles J. McGee, vice-president, and Dr. Jacob L. Everhardy, secretary-treasurer, all of Leavenworth.——Neosho County Medical Society has elected Dr. William E. Royster, president; Dr. William E. Barker, vice-president; Dr. Andrew M. Davis, secretary, and Dr. Ralph A. Light, treasurer, all of Chanute.——Shawnee County Medical Society, at its annual meeting in Topeka, elected Dr. Melancthon C. Porter, president; Dr. Samuel A. Johnson, vice-president; Dr. H. Milton Connor, secretary, and Dr. John N. Beasley, treasurer, all of Topeka.

KENTUCKY

Officers Selected.—At the annual meeting of Christian County Medical Society, held in Hopkinsville, the following officers were elected: president, Dr. Oscar E. Wright, Hopkinsville; secretary, Dr. William S. Sandbach, Casky; censor, Dr. John H. Rice, Hopkinsville, and delegate to the state association, Dr. Austin Bell, Hopkinsville.

Cocain Recommended in School Text-Book.—At a recent meeting of the State Board of Health, held in Louisville, action was taken on a text-book in physiology used in the public schools of the state, condemning it because it recommends the use of cocain in toothache. A committee was appointed to draft a bill for presentation to the next legislature empowering the State Board of Health to act in conjunction with the State Board of Education in selecting textbooks on physiology, chemistry, anatomy and hygiene for use in the public schools.

Louisville Temporary City Hospital Located.—The hospital commission has definitely decided the question of the location of the temporary hospital in which are to be housed the patients of the City Hospital during the building of the new hospital. The vote was a unit in favor of the University of Louisville Medical Department building at 517 S. Sixth Street. The engineer of the commission reported that the building can be made to accommodate 201 beds and that the probable cost of converting it into a temporary city hospital would be from $12,000 to $15,000. A letter will be sent to each architect in Louisville inviting plans for the new building.

MARYLAND

Election.—At the annual meeting of the Anne Arundel County Medical Society, held January 12, the following officers were elected: president, Dr. Thomas H. Brayshaw, Glen Burnie; vice-president, Dr. Jesse O. Purvis, Annapolis; secretary, Dr. Louis B. Henkel, Jr., Annapolis; treasurer, Dr. Frank H. Thompson, Annapolis; censors, Drs. Harry B. Gantt, Millersville; William S. Welch, Annapolis, and John T. Russell, Annapolis; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Charles R. Winterson, and alternate, Dr. Samuel H. Anderson, Woodwardville.

Baltimore

Conference on Mental Hygiene.—During the week ending February 6, a national exhibit and conference on mental hygiene will be conducted in the hall of the Medical and Chirurgical Faculty of Maryland. A publicity committee has been appointed, of which Dr. Harvey G. Beck is chairman. The exhibit will be under the charge of Dr. Marshall L. Price, secretary, secretary of the State Board of Health.

MICHIGAN

Location for County Sanatorium Fixed.—The Houghton County Tuberculosis Sanatorium will be located on the grounds of the County Poor Farm, overlooking Portage Lake.

Bequest.—Harper Hospital, Detroit, has received a bequest of $35,000 for the endowment of free beds for men, women, boys and girls in that institution by the will of the late Octavia Bates Williams of Baltimore.

Sanatorium Opened.—The Detroit Tuberculosis Sanatorium, situated on Twelfth Street, just north of the city limits, was formally dedicated January 15. Dr. William A. Spitzley has been appointed attending surgeon of the institution.

Personal.—Dr. Warren H. Taylor, Flint, has been selected as physician for Genesee county.——Dr. Roy T. Urquart, Grand Rapids, sustained painful injuries by crushing his thumb in a car door in South Bend, Ind., January 13.

The Late Small-Pox Epidemic.—The cost of the late small-pox epidemic to the city and county of Saginaw has been about $75,000.——A bronze medal is to be presented to each member of the National Guard of Michigan who did duty at the Michigan Home for the Feeble-Minded, LaPeer, during the recent enforced small-pox quarantine.

Gubernatorial Appointments.—Governor Osborn, on January 5, sent to the senate his list of appointments, which includes Dr. Leartus Connor, Detroit, as member of the State Board of Health; Dr. Charles W. Hitchcock, Detroit, as member of the board of trustees of the Eastern Michigan Asylum, and Dr. Joseph B. Griswold, Grand Rapids, as a member of the board of trustees of the Michigan Soldiers' Home.

Illegal Practitioners Fined.—George W. Lands, East Gilead, convicted in the circuit court at Coldwater of practicing medicine without a license, is said to have been found guilty

and sentenced to pay a fine of $75 and costs, amounting to a similar sum, or imprisonment in jail for fifty days.——Albert Churchill, Pellston, is said to have been fined $35 recently for the unlawful practice of veterinary medicine.

Regulates Admission of Patients to Hospital.—The Board of Regents of the University, on the recommendation of the medical faculty, has limited admission of patients to University Hospital to those whose admission is provided for by statutes; students in actual attendance at the university, emergency cases and patients sent to the hospital by a legally qualified physician. All other persons seeking admission to the hospital must make affidavit that they are not able to pay the ordinary charge of a physician. The abuse of the facilities of the hospital has not been extreme but has been sufficient to justify this action of the Board of Regents.

Farm School for Deficient Children.—At a meeting called by the Board of Education of Detroit, January 16, to arouse public sentiment in favor of establishing a farm training school for mentally deficient children, Dr. Henry H. Goddard and the superintendent, E. R. Johnstone of the New Jersey School for the Feeble-Minded, Vineland, delivered addresses. It was shown that on the average 3 per cent. of the children are imbeciles of various grades or idiots, making about 1,600 in Detroit at present; that nine-tenths of these are uncared-for children who cannot keep up in regular schools, notwithstanding the employment of special rooms for backward children; that these children largely recruit the criminal and pauper classes; that it is cheaper for the state to care for these patients in an institution which can be made largely self-supporting than to support them as criminals and paupers; and that heredity is the great cause of mental deficiency. It was urged that mentally deficient children be differentiated from simply dull children, by modern psychologic tests, and that these children be kept for life in a suitable public farm institution, that there they would be happier and more useful than at home, and would be prevented from propagating their kind.

MINNESOTA

Freed of Responsibility.—In the suit against Dr. Alexander R. Colvin, St. Paul, for damages alleged to have been received by a patient in the use of a defective brace, the jury decided in favor of Dr. Colvin.

Damages for Autopsy.—A jury in Minneapolis, January 13, is said to have returned a verdict of one dollar against Dr. S. Marx White, in a suit in which the plaintiff sued to recover $5,000 on the ground that a number of physicians had entered his home without permission and had dissected the body of his 2-year-old daughter who had died from anterior poliomyelitis, with the view to determine the manner in which the child had contracted the disease.

Elections.—At the annual meeting of the Minnesota Valley Medical Association held in Mankato, the following officers were elected: president, Dr. Louis A. Fritsche, New Ulm; *vice-presidents, Drs. Herbert B. Aitkens, LeSueur Center, and John J. O'Hara, Janesville; secretary, Dr. Adolph G. Liedloff, Mankato, and treasurer, Dr. George F. Merritt, St. Peter.——Blue Earth County Medical Society held its annual meeting in Mankato, recently, and elected the following officers: president, Dr. Adolph G. Liedloff, Mankato; vice-president, Dr Charles E. Bigelow, Madison Lake; secretary, Dr. Thomas C. Kelly, Mankato; treasurer, Dr. Lida Osborn, Mankato, and censors, Drs. John W. Andrews and Edward W. Benham, Mankato.——The annual meeting of Park Region District and County Medical Society was held in Fergus Falls, January 12. Dr. Otto M. Haugan, Fergus Falls, was elected president; Dr. Andrew J. Gilkinson, Osakis, vice-president; and Dr. Luther A. Davis, Dalton, secretary-treasurer,

MISSOURI

Personal.—The governor of Missouri has refused to accept the resignation of Dr. Daniel Morton, St. Joseph, colonel and chief surgeon of the National Guard of Missouri.

Charge Dismissed.—Dr. James R. Hull, Monroe City, accused fourteen months ago of the murder of Prof. John T. Vaughn, was freed of the charge in the Circuit Court of Lancaster, January 2.

Bequest to Hospital.—By the will of the late Edward Knell, Carthage, $1,000 is bequeathed to the Carthage Hospital Association as a trust fund, the proceeds to be used in giving hospital benefits to poor and needy individuals of Carthage.

Health Board Election.—The State Board of Health, at its annual meeting in Jefferson City, January 9, elected Dr. Ernest F. Robinson, Kansas City, president; Dr. Frank B. Fuson, Springfield, vice-president; and Frank B. Hiller, Kahoka, secretary.

St. Louis

Donation for Hospital.—Joseph Shoenberg, L. D. Shoenberg and August, members of the Jewish Charitable Educational Union, have each given $25,000 toward the erection of a National Hospital in Denver.

State Masonic Sanitarium.—The Board of Directors of the Masonic Home has decided to erect a sanitarium, to cost $100,000, on the grounds of the home, Delmar Avenue, providing accommodation for forty-two patients.

Hospital Saturday and Sunday.—As the result of the collection on Hospital Saturday and Sunday, fourteen checks, making a total amount of $42,009.30, have been sent to fourteen hospitals of the city, the amounts varying from $11,719.33 to the St. Louis Children's Hospital, to $250 to Provident and St. Louis Maternity hospitals.

Antituberculosis Society Elects Directors.—At the annual meeting of the St. Louis Society for the Relief and Prevention of Tuberculosis, January 12, thirty-five directors were elected, including the following physicians: Frances L. Bishop, James Stewart and John C. Morfit. Dr. Morris C. Tuholske, secretary, and Dr. Theodore W. Conzelman, treasurer of the society, presented their resignations.

NEBRASKA

Physician Goes to Penitentiary.—The supreme court, on January 11, affirmed the sentence of the lower court, which charged Dr. William H. Johnson, Lincoln, formerly of Wymore, with complicity in the death of Amanda Mueller who died from the effects of a criminal operation, and sentenced him to two years imprisonment in the penitentiary.

Personal.—Dr. William B. Kern, Grand Island, has been appointed superintendent of the State Hospital for the Insane, Hastings, Dr. John T. Hay, Lincoln, of the institution at Lincoln, and Dr. Andrew Johnson, Omaha, of the institution at Norfolk.——Dr. William Edmond, Nebraska City, has been appointed physician at the Institute for the Blind, vice Dr. Frank S. Marnell, Nebraska City, resigned.——Dr. Charles A. Oaks, Seward, has been appointed a member of the staff of the Hastings State Hospital.——Dr. Lewis A. Fairchild, Peru, who has been seriously ill, is reported to be convalescent.——Dr. Henry S. Bell has been appointed physician to the State Industrial School, Kearney.——Drs. Frederick H. Kuegle, Westpoint, and H. R. Carson, Omaha, have been appointed physicians to the State Hospital, Hastings.——Dr. James G. Muir has been appointed surgeon of the Soldier's Home, Milford.——Dr. Harry J. Wertman has been appointed physician of the Industrial Home, Milford.

Society Meetings.—At the annual meeting of the Omaha-Douglas County Medical Association, held in Omaha, January 10, Dr. Leroy Crummer was elected president; Dr. Burton W. Christie, vice-president; Dr. Robert R. Hollister, secretary (reelected); Dr. Millard Langfeld, treasurer (reelected); and Dr. John E. Summers, Jr., member of the board of censors (reelected), all of Omaha.——Fillmore County Medical Society, at its annual meeting in Fairmont, elected Dr. Joseph Bixby, Geneva, president; Dr. Frederick L. Beck, Geneva, vice-president; Dr. Jesse M. Carr, Fairmont, secretary-treasurer; and Dr. V. V. Smrha, Milligan, censor.——Webster County Medical Association, at its annual meeting, reelected the following officers: president, Dr. Robert Damerell, Red Cloud; secretary, Dr. Hugh S. Reed, Guide Rock; and treasurer, Dr. Ira A. Pace, Guide Rock.——Elkhorn Valley Medical Society, at its annual meeting, held in Norfolk, January 11, elected the following officers: president, Dr. William R. Peters, Stanton; vice-presidents, Drs. Anders P. Overgaard, Fremont, and William L. Crosby, Beemer; and secretary, Dr. Harry L. Wells, West Point.

NEW JERSEY

State Medical Society Meeting.—At a meeting of the board of trustees of the Medical Society of New Jersey, January 12, it was decided to hold the annual meeting of the society at Spring Lake, June 13-15.

Gaynor Memorial.—The Gaynor Memorial Fund, amounting to $15,184.73, has been presented to St. Mary's Hospital, Hoboken. Of this amount, $5,000 is to endow a bed in the hospital to be known as the Gaynor bed. The balance will be applied toward the reduction of the debt on the hospital.

Officers of Home for Incurables Elected.—At the annual meeting of the Bide-A-Wee Home, held in Atlantic City, Jan-

uary 4, the following were elected as members of the medical board: Henry T. Harvey, Philadelphia, and Bernard R. Lee, Elisha C. Chew, Arthur E. Ewens and W. Edgar Darnell, consulting surgeons, all of Atlantic City. The Bide-A-Wee Home is a state institution for incurables and is located in the lower part of Longport.

Elections.—At the annual meeting of the Passaic City Medical Society, January 12, Dr. George T. Welch was elected president; Dr. Leo H. Joyce, vice-president; Dr. Joseph H. Oram, secretary, and Dr. Thomas Glasgow, treasurer.——Monmouth County Medical Society, at its annual meeting elected Dr. Peter P. Rafferty, Red Bank, president; Dr. Joseph T. Welch, Long Branch, vice-president; Edwin Field, Red Bank, secretary, and Dr. Isaac S. Long, Freehold, treasurer.

NEW YORK

State Hospital for Cancer Patients.—After ten years of research work supported by state funds, Dr. Harvey Gaylord has announced that he is prepared to supply a serum which has been shown to be effective in treating cancer. Senator Loomis has introduced a bill into the legislature appropriating $65,000 for the erection of a hospital adjoining the laboratory in Buffalo. The land for the building is to be donated to the state and the bill names as trustees of the institution, Drs. Roswell Park, William H. Gratwick and Charles Cary, Buffalo, John G. Milburn and Charles S. Fairchild, New York City, and Frederick S. Stephens, Attica.

State Tuberculosis Hospital Report.—During 1910 the State Hospital for Incipient Tuberculosis at Raybrook received 128 patients. Of these ninety, or 73.13 per cent. were discharged apparently recovered, meaning that examination showed that all constitutional symptoms or expectoration of bacilli had not been seen for a period of three months, and that physical signs indicated healed lesions. Of the remaining incipient cases, in twenty-four patients, or 19.53 per cent., the condition indicated arrest of the disease. Of the seventy-nine received in moderately advanced stages of the disease, four, or 5.43 per cent., apparently recovered, and forty-one, or 56.14 per cent., showed arrest of the disease. Of the twenty-five patients received in advanced stages of the disease, five, or 20 per cent., were benefited to the extent that the progress of the disease was arrested. Of the total number of patients treated and considered medically during the year 42.29 per cent. were classified as apparently recovered, and 84 per cent. had derived appreciable benefit.

New York Hospital Buys New Site.—This institution has bought as a site for a new home the entire block bounded by Fifty-Fourth and Fifty-Fifth Streets and Eleventh and Twelfth Avenues at a cost of about $1,000,000. This site was chosen because it provides amply for light and fresh air, being bounded on the west by the Hudson River and on the south by De Witt Clinton Park. It is stated that the proposed group of buildings will surpass any similar group in the city, but ground will not be broken for a year. The New York Hospital is the oldest hospital in the city, having been chartered by the authority of King George III in 1771. In 1775, when the first building was complete, it was nearly destroyed by fire and it was not until 1791 that the hospital was enabled to begin its work. Among the governors of the institution in bygone days were John Adams, Aaron Burr, Thomas Buchanan and John Jay. During the past year the hospital and associated institutions treated about 70,000 patients and answered 9,000 ambulance calls.

New Commitment Plan.—At the convention of the State Bar Association in Syracuse on January 20 the report of the special committee on the commitment and discharge of the criminal insane was discussed and the following was offered in the place of Section 20 of the penal law:

> If on the trial of any person accused of any offence it appears to the jury on the evidence that such person did the act charged, but was at the time insane, so as not to be responsible for his actions, the jury shall return a special verdict, "guilty, but insane," and thereupon the court shall sentence such person to confinement in a state asylum for the criminal insane for such term as he would have had to serve in prison but for the finding of insanity; and if on the expiration of such term it shall appear to the court that such person is still insane, his confinement in such asylum shall continue during his insanity; and further, when such a verdict of "guilty, but insane," is returned in a case where the penalty for the verdict of guilty against a sane person is death, such sentence for the insane person thus found guilty shall be for life, and in all such cases the governor shall have the power of pardon after such inquiry as he may see fit to institute, on the question whether it will be safe to the public to allow such person to go at large.

The report will be circulated broadcast throughout the state for the purpose of arousing public opinion.

Buffalo

Election of Officers.—At the annual meeting of the Erie County Medical Society, held in Buffalo, the following officers were elected: president, Dr. Daniel V. McClure; vice-president, Dr. Thomas H. McKee; secretary, Dr. Franklin C. Gram; treasurer, Dr. Albert T. Lytle; censors, Drs. John H. Grant, Francis E. Fronczak, Arthur G. Bennett, George L. Brown and Lawrence Hendee; and delegates to the state society, Drs. John H. Pryor, Frederick C. Busch, Edward Clark, George J. Eckel and Eli H. Long.——The Buffalo Physical Education Society has elected the following officers: president, Dr. James W. Putnam; vice-president, Dr. Lesser Kauffman, and secretary-treasurer, Miss Alta J. Wiggins.

Hospital Situation in Buffalo.—A report submitted by invitation to the joint hospital committee of the Buffalo Common-Council by the standing Committee on hospitals of the State Charities Aid Association summarizes the situation as follows:

1. The present hospital situation in Buffalo is such that a new hospital must be built either by the county or by the city.
2. This new hospital should be separated entirely from any connection with the poor department and the almshouse. It is not meant for paupers, and it requires different standards of administration.
3. This hospital should provide for a minimum of 720 beds; 200 for tuberculosis, 200 for chronic cases, 100 for acute cases, 200 for contagious cases and 20 for detention cases.
4. It will be more economical for the community to build and maintain one general hospital than to build and maintain two separate institutions under different management.
5. A general municipal hospital should be built by the city, which is the logical body to have control, inasmuch as it furnishes 85 per cent. of the money and 90 per cent. of the patients.
6. The construction and management of the hospital should be entrusted to a board of managers as provided by Chapter 558 of the laws of 1910.
7. The hospital should be centrally located to insure better attendance by physicians, avoid long transportation of the patients, and secure better service and more convenience for the people.
8. The hospital should be built in accordance with a comprehensive plan adequate for the rapidly increasing needs of the growing city.

New York City

Brooklyn Hospital Out of Existence.—The Long Island Throat Hospital and Ear Infirmary has turned over its building, valued at $15,000, to the Brooklyn Eye and Ear Infimary as it felt that the latter institution was better prepared to carry on the work.

Italian Medical Society.—The officers of the New York Italian Medical Society for the current year are as follows: president, Dr. Antonio Stella; vice-presidents, Drs. Paolo Virdone, Brooklyn, and Giuseppe DiSanti; secretary, Dr. Rocco Bellantoni; and treasurer, Dr. Antonio Vernaglia.

Office Building for Physicians.—Plans have been filed for a new office building on Madison avenue, twenty-five stories in height, to be occupied exclusively by physicians and dentists.——The Physicians' Building, 40 East Forty-First Street, was opened for inspection, January 13. The space in the building is said to be almost entirely rented to physicians.

Finances of Academy of Medicine.—The report of the treasurer of the New York Academy of Medicine for the year ended December 15, shows the following assets: building and land, $504,426.59; mortgages, $117,500; savings banks, $7,226.36; library, $80,000; unpaid dues, $535; rents due, $125; cash on hand, $14,859.17; total, $724,672.12. The liabilities show the following: trust funds, $629,152.95; unexpended balances in trust funds, $3,433.85; prepaid dues, $165; total, $632,751.80. Excess of assets over liabilities, $91,920.32.

Bellevue Alumni Prizes.—The two annual prizes of $100 each offered by the society of the Alumni of Bellevue Hospital to the members of the house staff for the best papers based on observation and clinical study have been awarded this year to Drs. Alexander Hunter Schmitt for his essay on "The Relation of the Cervical Smear to the Diagnosis and Treatment of Diseases of the Fallopian Tubes," and to Dr. Frederick Lane Brown for his "Report of a Case of Infective Endocarditis Associated with an Unidentified Liquefying Bacillus."

Campaign to Supply Milk for Babies.—The Committee on Infant Mortality, of which Dr. Godfrey R. Pisek is chairman, started its campaign to raise $300,000 for the yearly maintenance of sixty milk stations throughout the Borough of Manhattan at a meeting held at the Plaza Hotel. On this occasion it was announced that the city budget for 1911 contains an appropriation of $40,000 for the support of milk stations. Dr. Abraham Jacobi argued that more could be done to lessen infant mortality by sending nurses into the home to explain to mothers than by lengthy lectures from eminent doctors.

XUM

Child Welfare Exhibition.—After a year's work by 300 specialists and 1,500 other persons interested in children, the Child Welfare Exhibit opened on January 18 in the Seventy-First Regiment Armory at Park Avenue and Thirty-Fourth Street. The primary object of the exhibit is to educate parents in the proper upbringing of children, considered from every possible point of view. Conferences are held every afternoon and evening and the subjects discussed embrace education, homes, recreation, work, health, law and the child and private philanthropy. Experts and specialists from all parts of the country will take part in these conferences. The exhibit will continue for several weeks.

Scholarship in Ophthalmology.—A scholarship in ophthalmology has been founded by the sons and daughter of Abram DuBois, who have presented Columbia University with $18,000 for a fund to be known as "The Dr. Abram DuBois Memorial Fund." The scholarship is open to graduates of the College of Physicians and Surgeons who have satisfactorily completed a term of service in an eye hospital, and have given evidence of serious intention of pursuing ophthalmology as a specialty. The income from the fund amounts to about $700 a year, and the holder of the scholarship is expected to devote himself to postgraduate study in foreign and American universities, preferably of a scientific character in connection with ophthalmology.

Anniversary Meeting.—The Society of the Alumni of Bellevue Hospital will celebrate its twenty-fifth anniversary February 28. There will be a reunion at the hospital in the afternoon with a staff reception, visits to wards and operating rooms and opportunity for examination of the present work of the institution. In the evening a reception will be held, followed by a banquet. The society numbers 332, each of whom must possess diploma showing his service on the hospital staff, with the exception of the permanent associate members, those who have been on the visiting staff for at least five years, and honorary members, of whom there are three, Drs. William T. Councilman, Boston, William J. Mayo, Rochester, Minn., and William Osler, Oxford, England.

Bequests to Charity.—The will of the late George L. Fox of Brooklyn bequeaths almost his entire estate valued at more than a million dollars to various charities. The following institutions have received gifts: Eastern District Hospital and Dispensary, $100,000; St. Catherine's Hospital, $25,000; Brooklyn Hospital, $20,000; St. Mary's Hospital, $25,000; German Hospital, $25,000; Jewish Hospital, $25,000; Home for Consumptives, $10,000; St. John's Hospital, Long Island City, $20,000, and New York Ophthalmic and Aural Institute, $10,000. The residuary estate, the value of which has not yet been computed, is bequeathed to the Brooklyn Bureau of Charities and the Brooklyn Association for Improving the Condition of the Poor. A substantial part of the residue is to be used for the benefit of crippled and blind children.——The will of the late Isaac Stern gives Mount Sinai Hospital, of which Mr. Stern was the president, $10,000 for the creation of the Isaac and Virginia Stern Endowment Fund.

The Prevention of Insanity.—The first public meeting in the campaign for the prevention of insanity was held at the New York Academy of Medicine, December 23. The meeting was conducted by the committee on mental hygiene of the State Charities Aid Association. Homer Folks advocated a campaign of publicity and education similar to that employed in the fight against tuberculosis. Dr. Albert Warren Ferris, president of the State Commission in Lunacy, stated that there was one insane person to every 279 of the population. He considered the use of alcoholic beverages the greatest cause of insanity and thought that immigration was also responsible for filling insanity wards. Dr. M. Allen Starr thought that many of the external causes of insanity could be controlled and urged the establishment of more dispensaries for the treatment of this form of disease. Pamphlets pointing out the causes of insanity and describing the early symptoms have been prepared for general distribution.

The Gibbs Memorial Prize.—The New York Academy of Medicine announces that five of its members will constitute a permanent committee of award for the Edward N. Gibbs Memorial Prize for Research on Diseases of the Kidney. The committee will also select the candidates. The award is to be advertised at intervals of not less than two years in medical journals and otherwise. Candidates must be physicians of not less than three years' experience, must be residents of the United States, and must furnish evidence of research already performed and of ability to prosecute the special work required. The research is to comprise original work on the causation, pathology, or new methods of treatment of diseases of the kidney. From the applicants the committee selects the one offering the best credentials, who shall from time to time be awarded the income of the prize fund for a term not to exceed three years, but it at all times retains the power to reject any unsatisfactory work. The completed research is to be presented in the form of a thesis bearing an appropriate title.

NORTH DAKOTA

Personal.—Dr. Howard A. LaMoure, superintendent of the State Hospital for Feeble-Minded, Grafton, has resigned and has been succeeded by Dr. Arthur R. T. Wylie, first assistant in the Minnesota Home for Feeble-Minded, Faribault.——Dr. and Mrs. N. Oliver Ranstad, Bismarck, have returned from Europe.——Dr. P. J. Weyrens, Sheldon, has been appointed physician of Ransom county.

Society Meetings.—Medical men of Hettinger County met in New England recently and organized the Hettinger County Medical Association and elected the following officers: president, Dr. James W. Stribling, New England; vice-president, Dr. J. Hamilton, Bentley, and secretary-treasurer, Dr. Fred T. Rucker, Mott.——At the annual meeting of the Stutsman County Medical Society, Dr. Gustave Goldseth, Jamestown, was elected president; Dr. Gilbert D. Todd, Medina, vice-president; Dr. William W. Wood, Jamestown, secretary-treasurer; Dr. W. Albert Gerrish, Jamestown, censor, and Dr. Adolphus W. Guest, Jamestown, delegate to the state society.

OHIO

Midwives Arraigned.—During the last week seven midwives of Cleveland were arraigned and fined for illegal practice. The fines were suspended and the women warned to obey the law in the future.

In Penitentiary.—Among the prisoners received at the state penitentiary, Columbus, December 27, was Dr. Andrew A. Pew, Dayton, recently convicted of performing an illegal operation and sentenced to five years' imprisonment.

Isolation Hospital Opened.—Cleveland has just opened a contagious disease hospital which has cost $135,000, and is said to be one of the finest and most modern in the country. The building is divided into four distinct sections and can accommodate 100 patients and 22 nurses.

State Meeting-Place and Date Fixed.—The Council of the Ohio State Medical Association, at its meeting in Cleveland, January 12, decided to hold the next meeting of the association in Cleveland, May 8 to 11. The Chamber of Commerce and the Engineers' Auditorium are selected as meeting places.

Barker in Cleveland.—Dr. Lewellys F. Barker of Johns Hopkins University gave an address before the Cleveland Academy of Medicine, January 16, under the auspices of the Western Reserve Chapter of the Alpha Omega Alpha Medical Fraternity. Following the meeting a smoker was held in honor of Dr. Barker at the University Club.

Gift to Hospital.— The Babies' Dispensary and Hospital, Cleveland, has received a donation of $100,000 from Mr. and Mrs. J. H. Wade as a memorial to Mrs. Anna R. Wade. This gift will enable the hospital to pay in full for the new dispensary and milk laboratory now under construction, and also for the purchase of sufficient land to give a frontage of 175 feet on East Thirty-Fifth Street. The new building will be ready for occupancy February 1.

Elections.—At the annual meeting of the Portage County Medical Society, held in Ravenna, January 12, the following officers were elected: president, Dr. Joseph H. Krape, Kent; vice-president, Dr. Eugene B. Dyson, Rootstown; secretary, Dr. Cyrus O. Jaster, Ravenna (reelected), and treasurer, Dr. Emily J. Widdecombe, Kent (reelected). At the annual banquet given by Dr. Wilford W. White, Ravenna, the retiring president, Dr. T. Clarke Miller, Massillon, delivered an address on "The Conservation of Human Life."——The Cleveland Academy of Medicine, at its annual meeting, elected the following officers: president, Dr. Walter B. Laffer; vice-president, Dr. William W. Holliday; secretary, Dr. Oliver A. Weber; treasurer, Dr. John E. Darby, and trustees, Dr. William T. Corlett and Clyde E. Ford.

OKLAHOMA

State Board President Acquitted.—Dr. William T. Tilly, Muskogee, president of the State Board of Medical Examiners, was charged with criminal libel on complaint of Dr. J. D. Hensley, Oklahoma City; the jury, on instruction from the court, found that the information was insufficient to sustain the charge, returned a verdict of not guilty.

Personal.—Dr. John Dice McLaren, of the State University, of Oklahoma, Norman, professor of physiology and experimental medicine, and secretary of the Medical School of the State University of Oklahoma, Norman, has resigned to accept the professorship of physiology in the Oregon State University Medical Department, Portland.——Fire in Lawton, December 30, caused $1,400 damage to the office of Dr. Henry A. Angus, and $250 to the office of Dr. John W. Malcolm.

Physician Wins Libel Suit.—Dr. G. F. Border, chief surgeon of the Border Hospital, Mangum, is said to have recovered judgment in the case brought in the Greer County District Court for $50,000 against Drs. Milton M. Dearmon, Thomas J. Dodson and Porter Norton, who are said to have written a libelous letter to the Pottawatomie County Medical Society, January 11, 1909. The presiding judge instructed the jury that the communication complained of was libelous and unprivileged.

Annual Elections.—The sixteenth annual meeting of the Central Oklahoma Medical Association was held in Enid, January 10. The following officers were elected: president, Dr. Fred H. Clark, El Reno; vice-presidents, Drs. Edwin D. Ebright, Enid, and Charles E. Thompson, Kremlin, and secretary-treasurer, Dr. M. M. Rollin, Oklahoma City.——Canadian County Medical Association, at its annual meeting in El Reno, elected Dr. Ralph F. Koons, president; Dr. Stephen S. Sanger, Yukon, vice-president; Dr. James T. Riley, El Reno, secretary-treasurer; Dr. Thomas M. Aderhold, El Reno, delegate to the state association, and Dr. Ralph E. Runkle, El Reno, censor.——Garfield County Medical Society, at its annual meeting in Enid, elected Dr. Mahlon A. Kelso, Enid, president; Dr. Jones, secretary; Dr. Wallace A. Aitkin and Chanley J. Lukens, Enid, censors.——At the annual meeting of the Oklahoma County Medical Society, at Oklahoma City, Dr. Robert M. Howard was elected president; Dr. John A. Reck, vice-president; Dr. William R. Bevan, secretary, and Dr. Arthur A. Will, censor, all of Oklahoma City.——Comanche County Medical Association, at its annual meeting, held in Lawton, elected the following officers: president, Dr. Jackson Broshears, Lawton; vice-president, Dr. T. J. Gipson, Taupa, and secretary-treasurer, Dr. David A. Meyers, Lawton.——The annual election of officers of the Tulsa County Medical Association resulted as follows: president, Dr. Ross Grosshart; vice-president, Dr. Paul R. Brown; secretary, Dr. Walter E. Wright, and treasurer, Dr. Seth De Z. Hawley.

PENNSYLVANIA

Philadelphia

Failed to Register Births.—Information charging sixteen physicians of the city with failure to register births were made by the state health authorities, January 11. The arrests are only formal.

Institute of Anatomy.—The old Philadelphia Dental College at Eleventh and Clinton Streets, which was purchased several months ago by Jefferson Medical College for $45,000, is to undergo extensive remodeling, and on completion will be conducted in connection with the college, as the Daniel Baugh Institute of Anatomy.

Personal.—Dr. Edgar Fahs Smith was the guest of honor at a dinner given by his associates In the chemical laboratory of the University of Pennsylvania, at the University Club on January 11.——Dr. Gwilym G. Davis has been made professor of orthopedic surgery in the University of Pennsylvania.——Dr. Alfred Heineberg has been made chief of the gynecologic clinic of Mount Sinai Hospital.——Dr. H. Brooker Mills has been elected assistant professor of pediatrics in the Medico-Chirurgical College of Philadelphia.

Officers Elected.—At a meeting of the Philadelphia Pediatric Society, January 10, the following officers were elected: president, Dr. James T. Rugh; vice-presidents, Drs. Theodore Le-Boutillier, Arthur Newlin and William N. Bradley; secretary, Dr. Maurice Ostheimer; treasurer, Dr. Howard C. Carpenter, and librarian, Dr. Charles F. Judson.——Philadelphia County Medical Society, at its meeting, January 18, elected the following officers: president, Dr. Christian B. Longenecker; first vice-president, Dr. Levi J. Hammond; associate vice-presidents, South Branch, Dr. William N. Bradley; Kensington Branch, Dr. Thomas R. Currie; West Branch, Dr. Henry D. Jump; Northeast Branch, Dr. Frank Embery; Southeast Branch, Dr. Aaron Brav; secretary, Dr. William S. Wray; assistant secretary, Dr. Herbert B. Carpenter; treasurer, Dr. Collier L. Bower, and censor, Dr. Lewis H. Adler, Jr. The society passed resolutions urging an investigation by a state commission of the appropriations from the state treasurer to hospitals, and also suggested the appointment of a joint committee of the senate, house of representatives, the State Board of Charities, and licensed physicians to investigate state institutions.——The South Branch of the Philadelphia County Medical Society, at a meeting December 30, elected Dr. Stuart C. Runkle, president; Dr. William N. Bradley, vice-president; Dr. Paul B. Cassidy, secretary.——West Philadelphia Medical Society, at a meeting, January 2, elected Dr. Hiram L. Lutz, president; Dr. Charles P. Pike, vice-president; Dr. Henry G. Munson, corresponding secretary; Dr. Walter M. Miller, financial secretary, and Dr. Edmund L. Graf, treasurer.——At the annual meeting of the College of Physicians and Surgeons, January 4, Dr. George E. deSchweinitz was reelected president; Dr. James C. Wilson, vice-president; Dr. Thomas R. Neilson, secretary; Dr. Richard H. Harte, treasurer; Dr. Frederick P. Henry, honorary librarian; Dr. Francis X. Dercum and William T. Shoemaker, councilors; and Drs. Richard A. Cleemann, S. Weir Mitchell, Arthur V. Meigs and James Tyson, censors.

UTAH

Medical Journal Changes.— The *Utah Medical Journal* announces that it has become an independent journal, with none of its past affiliations. The editorial management is in the hands of Dr. Frederick Clift, Salt Lake City. The associate editors are Dr. Eugene H. Smith, Ogden; Horace G. Merrill, Provo, and Russell J. Smith, Logan.

Personal.—Dr. Charles G. Plummer, Salt Lake City, who has been seriously ill with septicemia at the L. D. S. Hospital, is reported to be improving.——Dr. R. E. Worrell, who underwent operation for septicemia at the Dee Memorial Hospital, Ogden, January 1, is reported to be convalescent.——Dr. John A. Hensel, Eureka, has been appointed physician of Jurab County.

New County Officers.—At the annual meeting of the Utah County Medical Society, held in Provo, Dr. David Westwood, Provo, was elected president; Drs. Oscar A. Grau, Pleasant Grove, vice-president, and Horace G. Merrill, Provo, secretary-treasurer.——At the annual meeting of Salt Lake County Medical Society, Dr. Eugene W. Whitney was elected president; Dr. T. Catlett Gibson, vice-president; Dr. W. Brown Ewing, secretary (reelected); Dr. Robert R. Hampton, treasurer (reelected), and Dr. Robert W. Fisher, censor (reelected).

WASHINGTON

Sanitarium Established at Pasco.—Dr. William W. Watkins, Pasco, has established a sanitarium in that place.

Unlicensed Practitioner Fined.—Fanny Leake Cummings, Seattle, said to have been convicted of practicing medicine without a license, has been fined $250 and costs.

Health Board Election.—At the annual meeting of the State Board of Health, held in Olympia, January 9, Dr. Edwin L. Kimball, Spokane, was elected president, and Dr. Elmer E. Heg, Seattle, was reelected secretary.

Physicians in House of Representatives.—The House of Representatives of Washington has three physicians as members: Drs. Walter T. Christensen and James A. Ghent, Seattle, and Dr. William M. Beach, Shelton.

Beriberi in Seattle.—One man is said to have died, another to be dying in a hospital, and four others to be seriously ill with beriberi due to an outbreak on the British steamship *Beachy*, which arrived at Seattle recently from China.

Personal.—Dr. Stephen D. Brazeau, Spokane, has returned after a year abroad.——The Cle Elum-Roslyn Hospital Board has elected the following staff: Dr. Edward W. Stimpson, Roslyn, chief surgeon; and Drs. H. H. Keenan and H. Quaife, Roslyn; W. E, Keehl and Julius G. Newgord, Cle Elum, and E. Heston, Jonesville.

Tuberculosis Notes.—The state supreme court has ruled that tuberculosis sanatoriums are nuisances and should not be established in the residence portion of a city. This ruling was made on appeal from the superior court of King County which refused to grant a restraining order against a tuberculosis sanatorium in Seattle.——The Fort Spokane Indian Sanatorium has been closed and the eighteen patients and nurses have been sent to sanatoriums in Phoenix, Ariz., Lapwai, Ida., Ogema, Minn., and Tacoma.

WISCONSIN

Abduction Charge Fails.—Dr. John B. Spalding, health commissioner of Kenosha, who was arrested on a charge of kidnaping, December 23, was exonerated at his trial in Chicago, January 17.

Charges Dismissed.—Charges against F. L. Mertens and Dr. Nelson Washington, charged respectively with practicing med-

icine without a license and with malpractice, were dismissed by stipulation in the circuit court at Milwaukee, January 12.

Fined for Unlawful Practice.—B. W. Kinzie, Milwaukee, charged with unlawful practice of medicine, is said to have been fined $50 and costs. Sentence was suspended on two counts charging E. R. Binte and B. H. Binte with similar offenses.

Medical Board Wins.—In the case of S. R. Jansheski, Milwaukee, a so-called chiropractic, charged with advertising himself as a physician, the trial consumed five days, and the jury returned a verdict of guilty within thirty minutes. The case was prosecuted by the attorney of the Wisconsin State Board of Medical Examiners.

Personal.—Dr. Frederick W. Byers, Monroe, who has been seriously ill with cerebral hemorrhage, is reported to be gaining slowly.——Dr. Warren B. Hill has been elected president of the trustees of the Emergency Hospital, Milwaukee.——Dr. Robert W. Blumenthal, Milwaukee, who was operated on recently for appendicitis at the Milwaukee Hospital, has recovered.——Dr. Herman L. Nahin has been elected coroner of Milwaukee County, and has appointed Drs. Arthur Reitman and R. O. Friederich as his assistants, all of Milwaukee. ——Dr. James R. Kellogg has succeeded his father, Dr. Alonzo C. Kellogg, as a member of the advisory board of the State Tuberculosis Sanatorium, Wales, both of Portage.

GENERAL NEWS

School Hygienists to Meet.—The fifth Congress of the American School Hygiene Association will be held in the Academy of Medicine, New York City, February 2-4, under the presidency of Dr. Luther H. Gulick, New York City. Among the titles on the program are "The Problem of Teaching Sex Hygiene," "Vital Results of Open-Air Kindergarten," "The Relative Communicability, Dissemination and Prevention of Contagious Diseases," "Studies in Fatigue," "The Work of the Public Health Education Committee of the American Medical Association," "What Cities are Doing for the Health of Children," "The Physical Condition of Country as Compared with City Children," "School Instruction in Sex Hygiene" and "Individual Instruction in Personal Hygiene."

Meeting of Medical Reserve Corps.—The officers of the Medical Corps and Medical Reserve Corps of the Army met in Chicago, January 21. Col. L. Mervin Maus, Medical Corps, U. S. Army, presided, and Brigadier-General Bernard J. D. Irwin, Medical Corps, U. S. Army, retired, was the guest of honor. Representatives from the Medical Corps of the Army and Public Health and Marine-Hospital Service were also present. The object of the meeting was to bring together members of the Medical Reserve Corps in Chicago, and get them in closer touch with the medical officers of the united services. Addresses were made by Drs. Arthur D. Bevan, Albert J. Ochsner, Charles L. Mix, E. Wyllys Andrews, George W. Webster and others. It is expected that the next meeting of the corps will be held at Fort Sheridan during the summer.

Fraternity Meets.—The annual meeting of the Phi Chi Medical Fraternity was held in Louisville, December 29-31. The fraternity decided to hold its next meeting in Indianapolis. The resolution proposing to grant charters to no medical school not in Class A, according to the reports of the American Medical Association and the Rockefeller Foundation was not adopted, but it was resolved that hereafter no medical school, not recommended by the American Medical Association, will be given a charter. The following officers were elected: Dr. George W. Leavell, Louisville, grand presiding senior; Dr. J. A. Price, Atlanta, Ga., grand presiding junior; Dr. Thomas B. Pearson, editor-in-chief of the *Phi Chi Quarterly;* Drs. A. B. Elkins and Charles L. Koontz, Louisville, honorary editors; Dr. T. Elmer Grubbs, Los Angeles, associate editor; and Dr. Charles W. Hibbett, chairman of the executive trustees.

Association of American Medical Colleges.—The twenty-first annual meeting of this association will be held in Chicago at the Congress Hotel, February 27-28. The association will consider for adoption the report of the curriculum committee submitted last year, and any amendments which may be proposed, such as the more perfect regulation of the administration of entrance requirements and the elimination of conditions. The report of the committee on pedagogics will consider some very essential phases of medical teaching. The report of the committee on education will contain many recommendations for action. Papers will be read by the following: "Requirements for Admission to the Medical Course," George E. McLean, president, University of Iowa; "The Fifth or Hospital Year," Dr. F. F. Wesbrook, University of Minnesota; "Administration of Entrance Requirements," Dr. B. D. Harison, Michigan State Board of Registration in Medicine; "The Medical Library," Dr. C. M. Jackson, University of Missouri; "Unity of Purpose; Unity of Action," Dr. J. A. Witherspoon, Vanderbilt University. The secretary is Dr. Fred C. Zapffe, 3431 Lexington Street, Chicago.

Dr. Ashford's Work on Hookworm.—Major Bailey K. Ashford, Medical Corps, U. S. A., who has had charge of the fight against the hookworm in Porto Rico, arrived in New York, on December 26 on the steamer *Caracas.* He called attention, remarks the *Army and Navy Journal,* to the out-of-the-wayness of Porto Rico, as shown by the fact that the medical officers of the army had been fighting the hookworm long before the discovery of the disease in the southern states, and yet the press heralded that discovery as something new. Since 1904 there have been 300,000 cases of hookworm on the island. The Porto Ricans at last awakened from their lethargy when the army medical men proved to them that thousands were dying needlessly through a preventable disease contracted in most cases through the contact of healthy skin with infected earth, the coffee districts appearing to be the most infected. In the five years up to and including a part of 1909, of the thousands of patients treated only 426 have died. Major Ashford will return to his important work as soon as the health of his wife permits. The unflagging zeal of Major Ashford, his untiring enthusiasm and inspiring confidence in the ultimate victory of his crusade have been one of the most striking and beautiful evidences of the personal interest which officers of the service have taken in the work which the results of the Spanish War suddenly threw on them. The very quietness of his campaign against the disease indicates that he finds his reward in results rather than in the applause and notoriety of newspaper laudation.

FOREIGN NEWS

Ten Years of the German Society for Protection of the Economic Interests of the Profession.—This imposing title is generally shortened to the Leipziger Verband. This association is now exactly ten years old and numbers 23,500 members. The Verband has been involved in 1,700 disputes between the compulsory sickness insurance societies and their medical officers, and has carried all but a few to a successful outcome. It has also been instrumental in securing positions or locations for 17,000 physicians. This organized force has become a power in Germany, the effects of which are far-reaching and enduring.

Plague in Manchuria.—Cable reports of January 23 state that the epidemic of bubonic plague in Manchuria threatens international danger and that the Chinese government is instructing its ministers abroad to invite the governments to which they are accredited to send experts to the affected districts to study the plague and means for its extermination. The government offers to bear the expense of the crusade. Fudziadian, a suburb of Harbin and the particular plague spot of Manchuria, is to be isolated as the first systematic step to be taken toward exterminating the plague that has grown more threatening every day. This was decided on at a conference of the taotai and English and Chinese physicians said to have been brought about by pressure from the Russian government. The cable dispatch adds that a Russian physician who has just completed an inspection of Fudziadian, discovered three plague sources in the neighborhood of which 7,000 persons reside. Corpses are piled high in the streets and in the yards adjoining the homes. Last week there were 1,500 deaths in Fudziadian, and twenty-four bodies have been picked up in the streets of Harbin. Mukden, Kirin and Tieling have been invaded by the disease. Deaths among the Chinese employees of the Harbin mills are likely to result in the infection being carried in the foodstuffs exported to Amur and the maritime provinces. In the suburbs of Fudziadian the Chinese and European physicians are said to have been beaten by the soldiers.

Festschrift for Kernig's Seventieth Birthday.—The issue of the *St. Petersburg. Wochenschrift* for November 19 is a large *Festnummer* in honor of the seventieth birthday of Woldemar Kernig, the leading internist of Russia. It contains twenty-six articles in German from prominent Russian clinicians who have studied under him in the course of his thirty years' connection with the Obuchow Hospital at St. Petersburg. The list includes Cholzoff's report of his technic and results with suprapubic prostatectomy in two sittings, which he claims is such a harmless operation that even decrepit patients, with the kidneys in bad condition, bear it without injury. The interval between the opening of the bladder and the removal

of the prostate varies from three weeks to three months according to the condition of the patient. He lost three out of eleven patients with prostatectomy done at one sitting, but only one out of the twenty in which this two-sittings technic was followed. Another article is by Wladimiroff on the diagnosis of glanders by the anaphylaxis reaction. Another by L. Krewer discusses the diagnosis of brain syphilis, the very baffling manifoldness of the symptoms being, he says, the clue to the syphilitic origin of the syndrome observed. Among his fifty-nine patients with cerebral syphilis, thirty-five were cured by antisyphilitic treatment and all the others were materially improved except five, that is, 8.48 per cent., who succumbed. In all the fatal cases there had been epileptiform seizures. The absence of an aura with these epileptiform seizures, developing in adults, speaks further for the syphilitic origin, especially when the attacks occur in series, and the convulsion seems to be limited to certain groups of muscles and the consciousness is not entirely lost and does not seem quite intact during the intervals. Abelmann reports experiences which sustain the importance of determination of the ferments in the stools and the antiferments in the blood as an aid to differential diagnosis in children. A historical sketch of cholera in Russia, by F. Dörbek, states that cholera was unknown in that country until 1830, when the first epidemic of cholera invaded Europe, and here, too, by way of Russia, starting in Astrachan, after it had been smouldering in India for fourteen years.

MANILA LETTER

(From Our Regular Correspondent)

MANILA, Dec. 13, 1910.

Plague in Shanghai, China

The health authorities of Manila have been closely watching the development and spread of an epidemic of plague in Shanghai, China, which is reported to be still progressing.

There seems little doubt that plague has been effectually stamped out in the Philippines. It has been so long since a case has occurred here that probably no one, however pessimistic, can be found who would venture to make a statement to the contrary. The Bureau of Health is proud of this achievement and resents any statement tending to suggest that the disease still exists here.

The epidemic at Shanghai is of a serious nature and has greatly alarmed the foreign population. The disease is mostly confined to the thickly crowded Chinese section of the town but the inability of the health authorities to cope with the situation, due mostly to the opposition of the Chinese, places the large foreign section in an apprehensive situation. In the beginning of December, it was reported that the Chinese and the foreigners were cooperating in the eradication of the pestilence and were doing effective work quite harmoniously, but now we are informed by cable that "the plague is still taking great toll from the Chinese section of the city but native resentment against the strict attitude of the authorities is proving a great obstacle to its extermination." Deaths from plague are no longer reported because the Chinese are up in arms against sanitary measures. There have been a number of disturbances in the affected districts—shortly after the sanitary measures were first put on there was more or less serious rioting and several persons met death by violence. This seems to have been due to the autocratic attitude of the foreign health authorities in trying to force stringent regulations of modern western sanitation on the Oriental through the medium of the Occidental. As a result they have been compelled to back up and begin again at the proper place but with a serious handicap. It behooves Manila, and perhaps San Francisco and Seattle, to increase their vigilance in regard to inspection of commerce and passengers from or via Shanghai.

The plan of the campaign of eradication of plague as given by the *National Review* (Shanghai) is as follows: "A house-to-house inspection is carried on by women inspectors accompanied by Chinese doctors, both the ladies and the physicians being fully qualified according to western standards. The campaign is under the supervision of Dr. Cox of the health department of the British settlement of Shanghai, at the invitation of the leading Chinese.

"Whenever a case of suspected plague occurs in a house the inmates are sent to the Chinese Isolation Hospital and there are kept under observation, their clothing being meanwhile fumigated and disinfected and their house, immediately they have left it, barricaded off by means of a corrugated iron fence sunk 2 feet deep in the soil and so erected as to leave no loophole through which rats can escape. While the barricading is going on, the interior walls and floors are sprayed with a disinfectant by means of the hand spray. This operation being over, a quantity of sulphur is placed in iron bowls, and these bowls set floating in tubs of water, one in each room of the house, or block of houses, and when this sulphur is lighted all doors and windows are closed, all crevices and open joints in doors, walls or windows are plastered over with tough brown paper, so that the houses, so far as possible, are without ingress for outside air or egress for the sulphur fumes. Fumigation is allowed twenty-four hours, at the end of which time the doors are opened, and then all hollow ceilings or walls are broken down, when a number of dead rats are always found and these are so disposed of as to prevent their being a source of further infection. When the hollow walls have been destroyed they are replaced by solid brick walls; and in the case of the uptorn hollow floors the several inches of rattery, in which has collected the almost indescribable filth that has found its way through the crevices of the frequently rotten floor, are filled up with clean ashes and rubble, to the original level of the floor beams. On this basis of ashes and rubble a layer of cement or asphalt is laid and the floor thus becomes quite solid and too poor to feed a church mouse, let alone a rat. To finish off the work the walls and ceiling are thoroughly whitewashed and then the house becomes habitable again."

The outcome of these measures will be watched with interest for it is the first time that western sanitary measures have been put into effect on so large a scale in time of peace in any Chinese community. Although there seems to be a growing demand for modern medicine in China, still medicine is so closely bound up with religion, superstition and the so-called Oriental philosophy that western medical standards will at best be but slowly adopted.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Jan. 6, 1911.

Cremation in France and Abroad

From the official report on funerals it appears that in 1909 there were fewer cremations in France than in 1908. Abroad, the progress of cremation has been marked. In 1909 there were 13,500 cremations in the whole of Europe.

France and Belgium Agree in Regard to the Practice of Medicine on the Common Frontiers

France and Belgium have just come to an agreement according to which practitioners in medicine, surgery and obstetrics, as well as midwives and veterinarians residing in the border communes on either side of the frontier, are authorized to practice in the bordering communes across the line in which there are no resident physicians. The right of practicing in bordering communes of the neighboring country, however, does not give the right of being on a permanent footing there, of becoming domiciled there or of maintaining offices there.

Mineral Waters and Table Waters

To put an end to the numerous abuses in the sale of the so-called mineral waters, the superior council of hygiene of France has just decided that (1) "mineral water" is a water to which therapeutic properties are ascribed; it should be recognized as such by the Académie de médecine of Paris, authorized by the government and exploited under the conditions specified by the official organization; (2) "natural mineral water" in bottles is labeled so that it may be distinguished from other bottled waters; (3) in the exploitation of other waters, especially table waters, the employment of descriptive terms implying therapeutic properties is to be forbidden.

The Will of Dr. Henri Huchard

The late Dr. Huchard has bequeathed to the Académie de médecine a sum of $20,000 (100,000 francs) to found an annual prize to aid young students, who like his son, Marcel Huchard, in whose memory the prize is founded, are victims to professional devotion and to enable them to continue their studies.

An Institute of Infantile Hygiene

The general council of the department of the Seine has just voted to establish an institute of puericulture, which is to be both a popular center for the dissemination of knowledge of infantile hygiene, and a scientific center for the study of all questions related to infant-feeding, open to students, phy-

sicians, teachers, midwives, etc. Each year, more than 2,500 new-born infants are abandoned in Paris. These infants are to be examined by physicians and some selected to be entrusted to nurses who come regularly from the country to seek the little protégés of the city of Paris. The weakest and most undeveloped infants, and those which have contagious diseases or hereditary taint, are retained. They offer an ample field of study for physicians and students who wish to observe the growth of normal and feeble infants, to study the methods of artificial feeding, etc. But in order that the institute may serve for the popularization of infantile hygiene, Dr. Variot, the superintendent, proposes to install in the asylum a milk station in which unmarried mothers who wish to keep their children will receive aid and medical advice, if they nurse their children themselves, and good sterilized milk, if they are obliged to use the bottle. The new institute also will arrange conferences for teachers, who, according to the new programs, are obliged to give to young pupils the most elementary ideas of the care of children.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Jan. 5, 1911.

University Study in Germany

After the foundation of the German empire, the number of matriculates at the German universities increased from about 13,000 at such a remarkable rate that in the eighties the number had doubled and in 1904 had tripled. In the current semester 54,822 are enrolled as opposed to 52,407 in the previous year.

The yearly increase, 2,415, is somewhat smaller than that of the previous year, 3,670. The attraction of the university is moreover felt in neighboring countries; the French universities last year had 42,000 students. Of the entire number at present attending German universities, 52,404 are men and 2,418 women as compared with 50,557 and 1,850 in the previous year. At the ten Prussian universities, there are enrolled this winter 28,675 students (27,244 last year), in the three Bavarian, 9,341 (9,082); in the two Baden, 4,254 (4,101); and in the other six, including the imperial at Strasburg, 12,552 (11,980). The forward movement of physicians has continued, the number being 11,240 (as compared with 10,135 last year and 8,088 five years ago). Also with philologists, philosophers and historians, the marked increase of late years has not yet ceased. The smaller number of Protestant theologic students shows some improvement, as their number has increased to 2,535. There are 1,766 Catholic theologic students. Law students have diminished to a slight extent, their number being 10,890 (12,160), also dentists and students of pharmacy, the former from 1,395 in the previous year to 1,146, the latter from 1,279 to 954. It is interesting to determine the distribution of the German student body among the individual state universities and the changes that have lately occurred in this respect. Erlangen, Würzburg and Giessen have fallen off and the most marked increase has occurred at Halle, Jena, Kiel, Tübingen and Rostock. The University of Berlin retains its prominence, standing at the head with 9,686, and Munich holds the second place with 6,905.

If among the students attending the German universities there are also reckoned the so-called "Gastzuhörer," 3,528 men and 1,772 women, there are at the present time 60,122 persons receiving instruction at the German universities, a number not hitherto reached. The increase of the Berlin university which amounts to 883 students above the previous year is especially to be attributed to the attraction of the jubilee exercises.

In this increase of attendance, women have contributed proportionately more than men. In the various departments, the increase in attendance has been proportionally the greatest among theologic and medical students, the medical including 1,705 men and 159 women. European foreign countries send 841 men and 103 women; and those outside of Europe 145 men and 65 women; 69 more than last year come from America and 69 men from Asia. The Kaiser Wilhelm Academy for instruction in military medicine has this winter 414 students. Study by women has increased so that this winter there are 2,412 women, representing 4.4 per cent. of the German student body, as opposed to 2,169 (3.5 per cent.) last summer. This marked increase depends on an increased attendance from the empire itself and especially from Prussia; there are only 320 foreign women, of whom about half come from Russia and a third from America. In the different departments of university study, the present women students are distributed as follows: philosophy, philology, history and related studies, 1,370 as compared with 975 last year, medicine by 527, last year 476; natural science and mathematics 356 (287), dentistry 49 (46), civics and agriculture 60 (27), evangelical theology 7 (5) and pharmacy 5 (3).

Every year more and more, the educated women are devoting themselves to two fields; higher work in teaching and medicine. A third of all the female students are found at the University of Berlin, 806 (as compared with 626 last summer). At the ten Prussian universities 1,671 women are enrolled, at the three Bavarian 236, at the two Baden 370 and at the six remaining only 235. In the increase of women students, the Prussian universities have a much greater share than those in southern Germany. With the 1,772 women who are admitted this winter to the university lectures as listeners, the number of women attending the German universities at present amount to 4,184.

Carnegie Foundation for Life-Saving

As you already know from the newspapers, your great philanthropist, Andrew Carnegie, has contributed $1,250,000 to Germany for the purpose as expressed in his letter to the Kaiser, of diminishing the misfortunes connected with heroic efforts of saving human lives throughout the German empire and on its waters which have as a result the death or the invalidism of the life-savers. As may easily be understood, this new proof of magnanimous philanthropy has produced a great impression in Germany and especially with the emperor, who is peculiarly appreciative of all humanitarian efforts of this sort. In his letter of thanks, the emperor said: "The foundation will contribute to a large extent to the fulfilment in future of the duty of mankind to care for the victims of noble self-sacrifice in a way that has not before been possible. It will arouse in noble men the wish to perform acts of life-saving as they will lose all anxiety for the future of those they leave behind." Among those who are considered especially worthy of assistance are physicians. These are to be represented in the board of trustees of the foundation. The Kaiser himself has assumed the honorary protectorate.

International Exposition of Cripple Aid

An international exposition of aids for cripples will be held in connection with the International Hygiene Exposition in Dresden in 1911 and will have its own pavilion under the charge of the German association for the aid of cripples which will give any required information regarding the exposition through its business bureau (Berlin W. Bayreuther St. 13). Everything dealing with the care of cripples will be arranged in a systematic way in six different groups: (1) historical, developmental, statistical and literary data; (2) medical activity in the care of cripples; forms of disease, methods of treatment, results; (3) schools for cripples, ethical and religious education, practical instruction by schools; workshops; (4) social, legal and economic aspects; (5) building and arrangement of cripple homes and aid stations; (6) the cripple in art and literature. Each group will be arranged by a special overseer so that a complete supervision will be secured.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Jan. 3, 1911.

Child Labor in Austria

In a report by the school physicians, attention was called to the fact that the majority of working school children showed a very bad standard of physical fitness for the requirements of life. The matter was investigated by a committee under the auspices of a political party, and the results thus obtained are now brought to the knowledge of legislators with a view to obtaining adequate laws for the protection of children. In Vienna alone, 111,622 children under 14 years were engaged in work at home; 17,355 were employed in other households; 11,100 were working partly at home and partly out of the house, and 1,281 children were, so to say, independent workers, street vendors or the like. That this labor is not harmless is evident from its duration; 23 per cent. of all such children worked less than four hours a day, 37 per cent. were busy for four hours, 20 per cent. for eight hours, 1 per cent. for ten hours daily, 0.3 per cent. even more than that, while the remainder had no definite working hours. These figures

hold good for the winter half year. In summer time the conditions are worse, for the children have to work longer, 7.6 per cent. having a working day of over ten hours. The work is always done by school children. The mental work must be added to the physical work in order to find out the real amount of labor thus demanded of undeveloped individuals. The number of working hours thus arrived at amounted to fifty hours per week on an average; while 8 per cent. had more than sixty hours per week in winter, and more than 72 per cent. of the children in the summer had over sixty weekly work hours. This gives one the impression that the underfed children had longer working hours than the grown-up people.

Attempts to reduce the hours of school attendance for children employed otherwise have resulted only in increase of other work for them. In our country, school attendance is compulsory for all children between 6 and 15. Therefore, they have to sacrifice a good deal of the night to do the work demanded of them. Twenty-three per cent. of all working children had night work too; some had only from two to four weeks per year; some sixteen weeks; others even a longer period and 16 per cent. had night work too all the year round. The financial result of such "sweating" hardly counterbalances the detrimental effects of this system. The reports of the school physicians mention that the health of 103,877 children (75 per cent.) of those examined was unsatisfactory. The effects of physical work on cerebration were manifestly bad. Such a condition naturally affects national health and national power, for in our country military service is also compulsory; the overworked children cannot grow into fit soldiers. Therefore public interest is deeply involved in the proper solution of this problem.

Antituberculosis Campaign at Budapest

Since the International Medical Congress met in Budapest, the public authorities have become attentive to the necessities of modern hygiene, which hitherto have been somewhat neglected in the city. The latest scheme deals with the prevention of tuberculosis. A far-reaching campaign has been worked out by two men who already have done much to bring the public to an understanding on this point, Dr. Tauszk and Dr. Ruthy. One of the most radical features of the plan is the compulsory removal of infected persons into a special tuberculosis district, to be laid out in the hilly northeastern parts of the kingdom. Apart from that, the erection of a sufficient number of sanitariums is also planned. Tuberculosis is very frequent in the capital because of the congestion of the people in a small area. In Budapest, overcrowding is the result of a shameless policy by the houseowners, who have pushed up rents to a prohibitive height for smaller lodgings. In fact, several instances of a lodgers' strike have been witnessed there. The effects on the health of the poorer classes can be easily imagined. Mortality among children is high especially; 30 per cent. of all infants in the poorer population do not reach the end of their first year.

Attempted Organization of Hungarian Contract Practitioners

The contracts which hitherto have been the basis for apportionments of physicians to the industrial work are now being revised by a committee of physicians, who are trying to bring about an organization of the practitioners for this purpose. A strike which broke out recently ended unfavorably for the physicians, owing to the lack of discipline. A quiet but radical agitation is now working to bring about the required and desired union of physicians in Hungary, after which a renewed attempt will be made to improve the present condition of contract practice.

Marriages

PAUL L. ASHLEY, M.D., Wibaux, Mont., to Miss Mabel Reid, at Cleveland, January 16.

PHILIP FRANK SHAFFNER, M.D., to Miss Beatrice Melanie Weil, both of Chicago, January 18.

FREDERICK AUGUSTUS WASHBURN, M.D., to Miss Amy Silsbee Appleton, both of Boston, January 9.

ELMER ELLSWORTH KEPNER, M.D., to Miss Mamie Katherine Smith, both of Cleveland, January 3.

JAMES G. LAMB, M.D., Fisher, Ill., to Miss Elnora Larson of Voorhies, Ill., at Bement, Ill., January 4.

CHARLES RANSOM REYNOLDS, M.D., U. S. Army, to Miss Jane Boyd Hurd of Watkins, N. Y., December 26.

Deaths

William Grier, M.D. Surgeon-General, U. S. Navy, retired, died at his home in Washington, January 11, aged 94. Dr. Grier received his medical education in Baltimore and was appointed assistant surgeon, U. S. Navy, March 7, 1838; was made passed assistant surgeon in 1852; served during the Mexican and Civil Wars; was afterward a member and later president of the Naval Examining Board, and in 1877 was made surgeon-general, chief of the Bureau of Medicine and Surgery with the rank of commodore, and was retired on account of age, Oct. 5, 1878, after seventeen years and seven months of sea service and seventeen years and seven months of shore or other duty.

Harvey Lyman Rosenberry, M.D. Starling Medical College, Columbus, 1883; a member of the American Medical Association; formerly president of the Marathon County (Wis.) Medical Society; president of the Ninth Councilor District Medical Society; physician to the Marathon County Asylum for the Chronic Insane, and Marathon County Home and Hospital; president of the local board of pension examiners; medical director of the Great Northern Life Insurance Company; died at his home in Wausau, Wis., January 11, from cerebral hemorrhage, aged 53.

William Smith Ely, M.D. College of Physicians and Surgeons, New York City, 1867; a member of the American Medical Association and New York Academy of Medicine; formerly president of the Medical Society of the State of New York; for twenty years a member of the State Board of Medical Examiners; assistant surgeon of the One Hundred and Eighth New York Volunteer Infantry during the Civil War; for many years a trustee of the University of Rochester; died at his home in Rochester, January 15, from angina pectoris, aged 69.

John Flint, M.D. Harvard Medical School, 1903; passed assistant surgeon, U. S. Navy; a member of the American Medical Association; died in the Naval Hospital, Chelsea, Mass., January 11, from pneumonia, aged 34. After his service in the Massachusetts General Hospital, Dr. Flint entered the navy as an assistant surgeon in April, 1904, resigning in September of the same year. He then practiced in Chicago for a time, but reentered the medical corps of the navy in 1906, and was promoted to passed assistant surgeon in February, 1909.

Francis P. Casey, M.D. College of Physicians and Surgeons, New York City, 1864; of Auburn, N. Y.; from 1862 to 1864 medical cadet in the army and afterwards assistant surgeon of the Eighth New York Volunteer Artillery during the Civil War; who after the close of the war, went abroad and entered the Roumanian service and later served for one year as surgeon during the Russo-Turkish War; died in a hospital in New York City, January 3, from erysipelas, following an operation for a growth on the forehead, aged 69.

Lewis A. Querner, M.D. Medical College of Ohio, Cincinnati, 1867; a member of the Ohio State Medical Association and Cincinnati Academy of Medicine; formerly workhouse physician of Cincinnati; surgeon for the fire department for eight years, and for the police department for three years, and for one term coroner of Hamilton County; a hospital steward during the Civil War; died at his home in Cincinnati, January 7, from valvular heart disease, aged 65.

William Hull Ramsey, M.D. Beaumont Hospital Medical College, St. Louis, 1897; Medical Reserve Corps, U. S. Army; attending surgeon headquarters Department of the Missouri, Omaha; division surgeon for the Missouri Pacific System; associate professor of anatomy in the University of Nebraska; died suddenly in his hotel in Omaha, January 14, from chronic interstitial nephritis, aged 38.

Clarence Wright Heath, M.D. College of Physicians and Surgeons, Chicago, 1900; a member of the American Medical Association; oculist to the Erring Woman's Refuge of Reform and St. Joseph's Hospital; instructor in ophthalmology in the Chicago Policlinic; died in Mercy Hospital, Benton Harbor, Mich., January 16, from pneumonia, aged 40.

Charles Edward Inches, M.D. Harvard Medical School, 1865; a member of the Massachusetts Medical Society; assistant surgeon of the Thirty-Seventh and later of the Twentieth Massachusetts Volunteer Infantry during the Civil War; for several years physician to the North End Dispensary; died at his home in Boston, January 11, aged 70.

William Wolfe Lesem, M.D. College of Physicians and Surgeons, New York City, 1903; a member of the American Medical Association; and visiting physician to the City, Children's and Mount Sinai Hospitals; a specialist on nervous and men-

tal diseases; died at his home, January 10, from cerebral hemorrhage, aged 32.

Charles Baeder Williams, M.D. University of Pennsylvania, Philadelphia, 1889; a member of the Medical Society of the State of Pennsylvania, and resident physician of the Pennsylvania Hospital for the Insane, Philadelphia; died in the Pennsylvania Hospital, January 9, three days after a surgical operation, aged 45.

Mary Ann Holbrook, M.D. University of Michigan, Ann Arbor, 1880; for six years a medical missionary of the A. B. C. F. M., in Tung Cho, North China; and later teacher of science in the Kobe (Japan) College for Women; died in East Haven, Conn., December 2, from pneumonia, aged 56.

John Perrine Gilbert, M.D. New York University, New York City, 1856; assistant surgeon U. S. Navy, and later surgeon of volunteers during the Civil War; at one time postmaster of Long Island City; health officer of the town of Lyons, N. Y.; died at his home, January 7, aged 81.

James Monroe Graham, M.D. Maryland Medical College, Baltimore, 1902; a member of the Medical Society of Virginia; of Sidney, Neb.; formerly of Willis, Va.; died in the Methodist Episcopal Hospital in Omaha, January 9, from tuberculosis of the kidneys, aged 32.

Warren G. Priest, M.D. Washington University, St. Louis, 1878; for eight years chief dispensary physician and since that time chief vaccine physician of the St. Louis Health Department; died in the Koch Hospital, St. Louis, January 11, from tuberculosis, aged 56.

Edward Kirkland Shelmerdine, M.D. University of Pennsylvania, Philadelphia, 1900; of Germantown, Philadelphia; surgeon to the Philadelphia Rapid Transit Company; died in the Germantown Hospital, January 10, after an operation for appendicitis, aged 39.

Fred Smith Hutchinson, M.D. University of Vermont, Burlington, 1882; a member of the Vermont State Medical Society; died at his home in Enosburg Falls, January 6, from internal injuries resulting from being thrown from his sleigh three days before, aged 49.

Albert Joseph Mayer, M.D. Tulane University of Louisiana, New Orleans, 1902; a member of the American Medical Association; a member of the staff of the Touro Infirmary; died at his home in New Orleans, January 14, from influenza, aged 33.

William S. Leiter, M.D. College of Physicians and Surgeons, Chicago, 1890; of Claypool, Ind.; a member of the American Medical Association; is said to have committed suicide by hanging himself in his home in Claypool, January 12, aged 45.

John Wesley Harrison, M.D. Atlanta County (Ga.) Medical College, 1859; Medical College of Virginia, Richmond, 1860; a Confederate veteran; died at his home in Kempner, Tex., November 27, from pneumonia, aged 72.

Berwick Bruce Lanier, M.D. University of Maryland, Baltimore, 1892; for several years associate professor of principles of surgery in his alma mater; died at his home in Baltimore, January 1, from disease of the liver, aged 41.

John P. Lave, M.D. New York University, New York City, 1878; a member of the American Roentgen-Ray Society; first police surgeon of Chicago; died at his home in that city, January 15, from locomotor ataxia, aged 54.

Laban Langstaff Bradshaw, M.D. Bellevue Hospital Medical College, 1880; a member of the American Medical Association and New York Academy of Medicine; died at his home in New York City, January 9, from hemophilia, aged 57.

Edwin H. Botts, M.D. Fort Wayne (Ind.) College of Medicine, 1893; formerly a member of the American Medical Association; died at his home in Zanesville, Ind., January 10, from cerebral hemorrhage, aged 52.

Percy William Shedd, M.D. New York Homeopathic Medical College, New York City, 1904; of New York City; died in a hotel in Newark, N. J., January 10, from the effects of an overdose of morphin, aged 41.

William Aloysius Oberle, M.D. Baltimore Medical College, 1906; of Newark, N. J.; died in St. James Hospital in that city, January 5, from septicemia, contracted in performing a surgical operation, aged 28.

A. K. Kinne (license, Vermont, 1888); a member of the Vermont State Medical Society; for thirty years a practitioner; died at his home in Middletown Springs, January 7, from pneumonia, aged 73.

Theodore F. Fienup, M.D. St. Louis University School of Medicine, 1904; a member of the American Medical Association; died at his home in St. Louis, December 31, from pneumonia, aged 39.

R. Burdett Hoyt, M.D. Albany (N. Y.) Medical College, 1903; a member of the Medical Society of the State of New York; died at his home in Schenectady, January 11, from pneumonia, aged 29.

Samuel B. Junkin (license, Indiana, 1897); for nearly half a century a practitioner of North Webster; surgeon of volunteers during the Civil War; died at his home in that place, January 10, aged 82.

Charles Alfred Greene, M.D. University of Buffalo, N. Y., 1873; a member of the American Medical Association; died at his home in Windom, Minn., November 10, from heart disease, aged 65.

Louis H. Stoeffhaas, M.D. Rush Medical College, 1899; of Chicago; a member of the American Medical Association; died in St. Anthony's Hospital, Chicago, July 7, from endocarditis, aged 33.

David R. B. Greenlee, M.D. University of Pennsylvania, 1852; a member of the Arkansas Medical Society; a Confederate veteran; died at his home in Mayflower, January 1, aged 81.

Charles R. Watkins (registration, Texas, 1907, Twenty-Fifth Judicial District Board, 1894); died suddenly at his home in Floresville, December 31, from cerebral hemorrhage, aged 51.

James Oscar Breech, M.D. Barnes Medical College, St. Louis, 1906; assistant to the chair of gynecology in his alma mater; died at his home in St. Louis, December 30, from nephritis; aged 50.

Joseph Camille Gariepy, M.D. Laval University, Quebec, 1890; a member of the Fitchburg (Mass.) Medical Club; died at his home in Fitchburg, December 26, from heart disease, aged 45.

Nelson Ingram, M.D. Bellevue Hospital Medical College, 1865; surgeon in the navy during the Civil War; died at his home in Atlantic City, N. J., January 5, from acute gastritis, aged 67.

William Edward Curd, M.D. University of Nashville, Tenn., 1900; a member of the American Medical Association; died at his home in Copan, Okla., January 11, from typhoid fever, aged 37.

Daniel Buttrick Woodward, M.D. Harvard Medical School, 1865; a member of the Medical Society of the State of New York; died at his home in Ellenburg Corners, recently, aged 75.

William Sloan Creveling, M.D. New York University, New York City, 1851; a life member of the Medical Society of New Jersey; died at his home in Valley, January 1, aged 81.

Allison O. Douglass, M.D. Long Island College Hospital, 1876; a member of the American Medical Association; died at his home in Rome, N. Y., January 11, from pneumonia.

Robert L. Wood, M.D. University of Louisville, Ky., 1846; one of the oldest residents of Leavenworth, Kan.; died at his home in that city, January 1, from senile debility, aged 89.

William Jerome Doyle, M.D. Vanderbilt University and University of Nashville (Tenn.), 1892; died at his home in Greeley, Neb., December 26, from heart disease, aged 51.

William T. Grissom, M.D. University of Tennessee, Nashville, 1878; a member of the Kentucky State Medical Association; died at his home in Bliss, January 1, aged 57.

George Armstrong Hill, M.D. Jefferson Medical College, 1870; a member of the Medical Association of the State of Alabama; died at his home near Sylacauga, January 4, aged 61.

John Clark Spinks, M.D. Tulane University of Louisiana, New Orleans, 1857; died at his home in Shubuta, Miss., December 24, from cerebral hemorrhage, aged 79.

William Clark Griffith, M.D. Jefferson Medical College, 1888; of Mystic, Ia.; died in St. Joseph's Mercy Hospital, Centerville, Ia., January 9, from exposure, aged 67.

S. M. Lewis (license, Arkansas, 1903); for forty years a practitioner of the state; died at his home in Barren Fork, December 19, from pneumonia, aged 77.

Claiborne C. Stivers, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1880; died at his home in Horton, Kan., January 8, from pneumonia, aged 69.

Aneillio Preziosi, M.D. College of Physicians and Surgeons, Baltimore, 1909; died at his home in Stamford, Conn., May 23, from lobar pneumonia, aged 27.

Asa Brayton, M.D. Medical College of Ohio, Cincinnati, 1857; Bellevue Hospital Medical College, 1870; died at his home in Carey, O., January 11, aged 79.

James M. Kercheval, M.D. University of Pennsylvania, Philadelphia, 1858; died at his home in Nashville, Tenn., January 3, from influenza, aged 75.

Ernest Robertson McGregor, M.D. University of Georgia, Augusta, 1910; died at his home in Athens, Ga., December 19, from hemophilia, aged 32.

Newton Emmer Heath, M.D. Albany (N. Y.) Medical College, 1883; died at his home in Lee, Mass., January 7, from heart disease, aged 50.

Byron E. Webster (license, years of practice, Illinois, 1878); died at his home in Benton, December 13, from cerebral hemorrhage, aged 71.

William Edward Pole, M.D. Jefferson Medical College, 1900; died at his home in Philadelphia, August 29, from sarcoma of the liver, aged 42.

Hugh C. Discus, M.D. Physio-Medical Institute, Cincinnati, 1863; died at his home in Utica, O., January 8, from pneumonia, aged 76.

John Icilius King, M.D. Bellevue Hospital Medical College, 1873; died at his home in Burghill, O., January 3, from pneumonia, aged 62.

Thomas M. Carpenter (registration Greene County, Pa., 1884); died at his home in Deep Valley, Pa., August 28, aged 68.

J. P. Eichler, M.D. Germany; for sixty years a practitioner; died at his home in Fayetteville, O., September 19, aged 87.

"The Propaganda for Reform"

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION.

THE INCOMPATIBILITY OF ANTIPYRIN, CALOMEL AND SODIUM BICARBONATE

An inquiry has been received from a correspondent concerning the incompatibility (thought to be dangerous) of a mixture of antipyrin, calomel and sodium bicarbonate in the following prescription:

℞ Mild mercurous chlorid.....2 grains
Antipyrin ..... 6 grains
Sodium bicarbonate ..... q. s.
Mix and divide into 12 powders.

On account of lack of authoritative information on the subject the matter was referred to the Association laboratory, which made the following report:

"The literature contains little definite information concerning the incompatibility of a mixture of these substances.

"Holland[1] states that antipyrin is incompatible with many substances, among which calomel and sodium bicarbonate are mentioned, but nothing is said concerning its incompatibility with a mixture of the two salts. Another writer[2] reports that antipyrin is incompatible with the chlorids of mercury, while another[3] declares that 'antipyrin is almost universally incompatible.' It is frequently stated that antipyrin is incompatible with calomel, mercuric chlorid, mercurous oxid and metallic mercury being formed. This assertion, which is made by Werner[4], needs experimental confirmation. One writer[5] says that there is but little danger in dispensing calomel and antipyrin when the former is prescribed in small doses, as but a small part of the calomel (one-tenth or less) is converted into corrosive sublimate.

1. Med. Chem., Ed. 2, 1908, p. 482.
2. Stark: Am. Pharm. Assn. Proc., 1893, xli, 506.
3. Fantus: Prescription Writing, 1906, p. 219.
4. Pharm. Ztg., 1896, xli, 395.
5. Critic and Guide, 1910, xlii, 117.

"As it seemed worth while to obtain some experimental data on the point involved, a mixture was prepared having the following composition:

Calomel ..... 2 parts
Antipyrin ..... 6 parts
Sodium bicarbonate .....12 parts

"By qualitative tests it was demonstrated that when this mixture is treated with water a bluish-gray residue remains undissolved and a soluble mercury salt is found in solution. The composition of the insoluble residue was not determined, but there was considerable evidence that it is largely composed of metallic mercury and unchanged calomel. If the prescription powder be treated with an excess of 0.2 per cent. hydrochloric acid the reaction noted above does not occur; no mercury is found in solution and the calomel appears to be unchanged. If a mixture of calomel and antipyrin be suspended in water no reaction appears to take place at once. The calomel retains its natural color and no mercury salt is found in the solution. If to this aqueous solution of antipyrin containing suspended calomel some sodium bicarbonate be added the calomel immediately changes color and the mixture becomes of the same appearance as does the original mixture when treated with water.

"Preliminary determinations indicated that from one-sixth to one-fourth of the calomel present is converted into a soluble mercury salt. If the entire quantity prescribed be administered the patient would receive a soluble mercury salt equivalent to from ⅓ to ½ grain of corrosive sublimate.

"The incompatibility of the mixture will be apparent to any physician who will take the trouble to pour a few drams of water on a small portion of the powder; and that it is dangerously incompatible is shown by the large proportion of the mercury salt which is rendered soluble. If the mixture be administered in a capsule the danger would be lessened somewhat, as the acidity of the stomach would tend to neutralize the sodium bicarbonate, on the presence of which the reaction appears to depend. Since medical and pharmaceutical textbooks contain so little definite information concerning the incompatibility of this combination, too much blame should not be attached to those who have prescribed it and to pharmacists who have filled such prescriptions. However, if used at all, it should be in the most cautious dosage."

ONE DRUG JOURNAL'S ATTITUDE ON NOSTRUMS

A correspondent wrote from Hawaii to the *Druggists Circular* making the following request:

"In the interest of a suffering public, we desire to obtain from you information as to the highest class and most efficacious cure for the disease of asthma, and the name of the firm or house who manufactures same, with the purpose of securing the sole agency of the remedy for sale in this Territory of Hawaii.

"Also . . . an emmenagogue which has stood the test of clinical experience and recognized as the standard.

"Trusting to receive this information at your hands at the earliest convenience, and thanking you in advance for humanitarianism . . . "

The *Druggists Circular's* reply is admirable and we give it in full; it needs no comment:

"We are sorry to have to say that we are unable to supply the desired information, and the reason for our inability should suggest itself to any druggist who gives the matter serious thought for a few moments.

"Asthma is a manifestation which frequently baffles the skill of the best physicians who are called on to treat patients suffering with it, and perhaps no two cases should be treated exactly alike, for not only the varying phases of the disease itself, but the idiosyncrasies of the patient must be taken into consideration if the best effect is to be obtained. If, then, a competent physician, who is familiar with the case and sees the patient from time to time and uses his best judgment in varying the treatment as necessity arises, does not always get results which are satisfactory to all concerned how can it be possible for some nostrum manufacturer who has never seen the sufferer and knows nothing about the peculiarities of his case, to be able to prescribe a single remedy which will fit it and thousands of others partly like it and partly different?

"The same question might be asked with at least as much if not even greater propriety concerning the other remedy requested and the complaint for which it is to be used.

"'In the interest of a suffering public'—which has already suffered too long at the hands of nostrum manufacturers whose principal asset is public ignorance—we suggest that druggists use their influence to send sufferers from asthma and other ills to those who are legally authorized and presumably professionally equipped to diagnose their cases and prescribe remedies for their relief. The man who undertakes to diagnose and prescribe when he has not completed a course of study which entitles him to legal recognition as an expert in the practice of medicine, thereby becomes a quack and may justly be regarded as a faker; and his status is not changed by his surroundings, no matter whether they be the luxurious fittings of a suite of offices in a large manufacturing establishment, rows of bottles over a prescription counter, or the gaudy trappings of a mountebank's cart at a county fair."

Correspondence

Bacteriologic vs. Clinical Control of Diphtheria Quarantine

To the Editor:—Dr. Simonds in his article on diphtheria (THE JOURNAL, Jan. 7, 1910, p. 37) said: "It is evidently unjust to . . . the patient . . . to place him in quarantine on a clinical diagnosis of diphtheria, which in over 40 per cent. of the cases is proved by bacteriologic examination to be incorrect."

It seems to me that this is assuming an infallibility for bacteriologists that is unwarranted. No careful and experienced physician would consider even half a dozen bacteriologic examinations as proof of error in a case diagnosed as diphtheria from clinical evidence such as the presence of a membrane and a rise of temperature. Negative evidence must always be uncertain, and, while a positive diagnosis based on bacteriologic examination should be taken as conclusive even where the clinical evidence is negative, it does not follow that the reverse is true. In other words, the presence of the characteristic membrane is quite as conclusive as a positive bacteriologic finding.

THOMAS J. TURPIN, Corpus Christi, Tex.
Health Officer Nueces County.

[The above was referred to Dr. Simonds, who writes:]

To the Editor:—It must be borne in mind that the statement quoted by Dr. Turpin referred solely to the regulation of quarantine in diphtheria. It was not intended to apply to the treatment of the disease. When the clinical symptoms are reasonably clear, the physician who administers antitoxin without waiting for a bacteriologic examination is to be commended. The harmlessness of antitoxin and the more favorable results obtained from early injections render its use on clinical grounds alone perfectly justifiable. But in the case of quarantine I insist that it is unjust to a patient, especially to an older child or adult, to confine him for an arbitrary period of time on clinical grounds alone when a bacteriologic examination is obtainable. It is just as unfair to the community to release such a patient merely because all symptoms of diphtheria have disappeared.

It is true that a small percentage of positive cases are negative on first culture—at the Boston City Laboratory something more than 6 per cent. This simply means that neither clinical nor bacteriologic examinations are absolutely infallible, but that the percentage of error in the latter, especially where single negative cultures in suspicious cases are followed by second cultures, is so small that we are justified in relying entirely on this method for the regulation of quarantine.

I cannot agree with Dr. Turpin that "the presence of a characteristic membrane is quite as conclusive as a positive bacteriologic finding." For the control of treatment such a principle is very good; but from the standpoint of public health it is exceedingly bad for two reasons: First, when the people of a community are taught that a membrane is characteristic of diphtheria it will be difficult to convince them that the patient may still be a source of danger after the membrane has disappeared. Second, such people will also refuse to believe that a perfectly healthy person may be a carrier of virulent diphtheria bacilli and thus be a menace to his associates. It is from patients released too early and from healthy carriers that the disease is kept alive in a community.

To sum up the whole matter, the control of treatment by clinical manifestations is entirely justifiable; but the regulation of quarantine should be based solely on the results of bacteriologic examinations, when such are obtainable. Every suspicious case should be held in temporary quarantine until the result of the bacteriologic examination is known. Such a method, while not absolutely infallible, is far more accurate than clinical observation; it will certainly insure better protection to the community.

J. P. SIMONDS, Indianapolis.

Gonorrhea and Ophthalmia Neonatorum

To the Editor:—I am in receipt of a circular letter from the Ohio State Board of Health and the Ohio Commission for the Prevention of Blindness, stating that more than one-fourth and nearly one-third of all blindness of infants in Ohio is due to ophthalmia neonatorum, urging the necessity of preventive treatment of the new-born and also announcing the free distribution of silver nitrate solutions to physicians and midwives. While this is a laudable effort and one to which we should all lend a helping hand, we must go a step farther, it seems to me, if we wish to strike at the root of this evil. For every child born with this disease there is a mother who is infected with gonorrhea. For nearly every mother so infected there is a father who married with an uncured case of gonorrhea. While it may be true that in many instances the man has made no effort to obtain a cure, or what is worse, has been self-treated or treated by a druggist, it is equally true that in the majority of cases he has been treated and discharged as cured by a practicing physician. It is high time to call a halt and to ask that the treatment of this disease be given the same serious consideration as is granted to other much less serious and far less disastrous diseases. The presence or absence of a visible discharge seems to be the only determining factor that is used by the majority of men in diagnosing the presence or absence of gonorrhea. This is utterly fallacious. In the same category may be placed a single determination of the presence or absence of the gonococcus in the discharge. Of course the use of such means leads to the discharge from treatment of thousands of men who are still suffering from the disease and who will, in the majority of instances, infect their innocent partners. Instances of this kind have come to the notice of every practicing physician in this country. The following item, clipped from a Cleveland daily paper, illustrates the frequency of such cases:

TO PROSECUTE MIDWIFE—SOCIETY CHARGES THAT WOMAN NEGLECTED BABY'S EYES

A warrant was yesterday issued from the police prosecutor's office for the arrest of Mrs. Rose Natrefa, charging her with failing to report soreness of a child's eyes. Mrs. Natrefa, who is a licensed midwife, lives at 2253 East Eighty-Third Street.

Officers of the Society for the Promotion of the Interests of the Blind found Luretta Sovenski, 3 days old, 7610 Stanton Court, S.-E., infected with what physicians say is an extremely virulent case of sore eyes. The baby was at once removed to Lakeside Hospital, where the physicians say there is only a slight chance of preserving its sight. The midwife, officers who made the investigation say, told the mother of the child that the case was nothing more than a cold in the baby's eyes.

I have not touched on the morbidity in the patient himself, which, as we all know, is of alarming frequency, and, in the case of women especially, is attended with such dire results. Let me repeat, the time has come for intelligent, serious and persistent treatment of gonorrhea to prevent the consequences of present-day methods.

DR. W. E. SAMPLINER, Cleveland.

Action of One Society on the Secret Commission Evil

To the Editor:—The subject of fee-splitting and commission-giving by surgeons has come up in the Western Surgical Association, and the society has taken some definite steps to eliminate the practice. Dr. John P. Lord, in his presidential address, read a paper on this subject. The executive council

eliminated a number of applicants for membership from the list of those eligible to election, because of authentic knowledge of such practice on their part.

The executive council went a step further than this, however, and considered the question in connection with some of those who are already members of the association. A number of members were dropped in order to increase the efficiency of the society. They were stricken from the list for various reasons; a few of them for the practice of fee-splitting and commission-giving.

A. T. MANN, Secretary, Minneapolis.

Transmission of Bubonic Plague

To the Editor:—In THE JOURNAL (December 24, 1910, p. 2258), in an abstract of a report on bubonic plague in California by an officer of the United States Public Health and Marine-Hospital Service, occurs the following:

> The ground-squirrel is the reservoir of plague germs, but does not transmit the disease to human beings, but by its bite infects the rat, which in turn, acting as a germ-carrier, bites and infects a human being, who in due course comes down with bubonic plague.

The latter presumably then bites his fellow-men and thus passes the disease along, and this would argue the necessity for muzzling every person afflicted with plague! But, seriously, what has become of the rat-flea which recently figured so largely as an indispensable factor or link in the spread of this disease? And an answer to this question is required by what follows the above quotation, namely, "as all that is necessary to start a season of bubonic plague anywhere is an infected ground-squirrel or human being."

Is this orthodox teaching concerning the science of sanitation as applying to bubonic plague, or is it merely an instance of misquoting or bad reporting? For, if the latter, it is too serious to pass uncorrected.

GEORGE HOMAN, St. Louis.

[COMMENT:—The error was due to a mistake of the reporter. The sentence should read: "The ground-squirrel is the reservoir of plague germs, but does not transmit the disease to human beings. Squirrel-fleas transmit the plague germs to rats, and rat-fleas in turn bite and infect human beings."—ED.)

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ACUTE THYROIDITIS

To the Editor:—I was very much interested in the report in THE JOURNAL (Nov. 12, 1910, p. 1732) of a case of acute thyroiditis, because of having encountered, a few years ago, my first and, so far, my only patient suffering from this condition, and because of the apparent rarity of the condition, the suddenness of onset, the difficulty of determining the etiology, at least in my patient. I cannot see valid reasons for attributing the thyroiditis, in the case of Drs. Lewis and O'Neill, to the infection of their patient from the horses suffering from epizootic. While it could not be disproved, I cannot but feel that it is possibly a coincidence, especially because of the rapid and complete recovery. My patient had a slight recurrence a few weeks later, which, I understand, may be expected in these cases. I did not see him in the second attack, which was mild, giving him but little trouble, he said.

Another thing which has impressed me is the slight mention of the condition in the literature, many of the text-books not referring to it at all. I am quite sure that the well-developed case of much severity, confronting for the first time the young practitioner who perhaps has never heard of the condition or has forgotten it, will occasion some serious and anxious thought on his part.

A German farmer, of good habits, aged 65, had been in his usual good health, doing no hard work, although still a very active man. On Aug. 9, 1904, he had gone to the elevator, some five or six miles from his home, and was returning shortly before noon in an open lumber wagon. When nearing home he suddenly noticed a sensation of pressure in the throat, increasing to choking, with dyspnea and dysphagia. Putting his hand to his neck, he found an immense tumor. He managed to get home and was brought immediately to my office. These symptoms came on very rapidly, reaching their acme, he says, in less than an hour. I saw him within two or two and a half hours of the onset.

The patient was somewhat nervous and excited, cyanotic, hoarse and suffering great difficulty in speaking, with great dyspnea and dysphagia. The thyroid gland was immensely enlarged, distended and distinctly outlined, the overlying skin flushed. He was put to bed and morphin and cathartics administered and an ice-bag applied over the thyroid gland. The condition began to improve in a few hours and passed off in two or three days, with no trouble since, except as stated above. This patient has developed in the meantime cardiac symptoms, that is, within the last two or three years, apparently due to myocarditis.

I have talked with a friend in St. Louis who has encountered three or four cases of acute thyroiditis in his practice. One of the patients died in an attack; I think, a second attack.

I should like to hear from others and to have references to literature on this condition.

G. L. ARMSTRONG, M.D., Taylorville, Ill.

ANSWER.—Our correspondent reports a very interesting case, although perhaps some doubt may be thrown on the diagnosis of thyroiditis, inasmuch as swelling occurring so suddenly would suggest hemorrhage or some other cause than inflammation. Little is given in text-books on this subject and literature is scanty. The following are some of the principal articles on acute non-suppurative thyroiditis:

Kyle, D. B.: Simple Acute Thyroiditis with Report of Two Cases, *Ann. Otol., Rhinol. and Laryngol.*, May, 1900; abstr. in THE JOURNAL, July 21, 1900, p. 187.

Illoway, H.: Case of Acute Thyroiditis of Rheumatic Origin, *Ann. Otol., Rhinol. and Laryngol.*, May, 1900; abstr. in THE JOURNAL, July 21, 1900, p. 187.

Secord, E. R.: A Case of Acute Thyroiditis, *Canada Lancet*, February, 1903.

Garbini, G.: Acute Thyroiditis, *Arch. ital. di otol.*, 1903, xiv, No. 1.

Quervain, F. de: Acute, Non-Suppurative Thyroiditis, *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1905, xiii, Supplement; *Semaine méd.*, 1905, xxv, No. 44; abstr. in THE JOURNAL, Dec. 2, 1905, p. 1765.

Lublinski: Acute Iodin Intoxication and Acute Inflammation of the Thyroid, *Deutsch. med. Wchnschr.*, 1906, xxxii, No. 8; abstr. in THE JOURNAL, April 14, 1906, p. 1147.

Lamb, S. D.: Case of Acute Thyroiditis, *Washington Med. Ann.*, 1907-08, vi, 243.

Dunger, R.: Acute Non-Suppurating Thyroiditis, *München. med. Wchnschr.*, Sept. 8, 1908; abstr. in THE JOURNAL, Oct. 17, 1908, p. 1381.

Schwerin, H.: Acute Non-Suppurative Thyroiditis, *München. med. Wchnschr.*, Oct. 13, 1908; abstr. in THE JOURNAL, Nov. 21, 1908, p. 1826.

Lecène, P., and Metzger: Acute Thyroiditis in Puerperal Infection, *Ann. de Gynéc. et d'Obst.*, February, 1910; abstr. in THE JOURNAL, April 2, 1910, p. 1174.

Parisot, J.: Acute Thyroiditis and Cardiovascular Complications, *Presse méd.*, May 7, 1910; abstr. in THE JOURNAL, June 11, 1910, p. 2007.

Lewis, J. P., and O'Neill, B. J.: Acute Thyroiditis with Edema of the Glottis, THE JOURNAL, Nov. 12, 1910, p. 1732.

DOSE AND VALUE OF SALVARSAN AND OTHER ARSENIC COMPOUNDS

To the Editor:—Please answer the following questions:

1. What per cent. of arsenic does each of the following contain: arsenous acid; sodium arsenate; sodium cacodylate; salvarsan?
2. What is the maximum single dose, by mouth, of arsenous acid, sodium arsenate, sodium cacodylate?
3. What is the maximum single dose, hypodermically, of sodium cacodylate; salvarsan?
4. Would it not be possible to introduce into the system with sodium cacodylate as much arsenic as it is possible to do with salvarsan, and in as short a period of time and with as little or less danger to the patient? If so, what advantage has salvarsan over sodium cacodylate in the treatment of syphilis?

G. W. SHRIVER, Sistersville, W. Va.

ANSWER.—1. Arsenous acid (arsenic trioxid) contains 75.74 per cent. of arsenic; sodium arsenate (crystallized) contains 24.01 per cent. of arsenic; sodium cacodylate (crystallized) contains 35.64 per cent. of arsenic; salvarsan should contain 34.16 per cent. of arsenic.

2. The dose of arsenic trioxid is given as from 0.002 to 0.004 gm. (1/30 to 1/15 grain). It may be increased gradually as tolerated by the patient, and it is impossible to state the maximum dose that can be given, except that we know the fatal dose is as small as 2 grains, and probably 1 grain may be fatal in some patients. The compounds of arsenic acid, like sodium arsenate, are not so poisonous as those of arsenous acid, hence sodium arsenate can be given in larger doses. The dosage is stated to be 0.003 to 0.008 gm. (1/20 to 1/8 grain). The dose of sodium cacodylate is from 0.03 to 0.13 gm. (1/2 to 2 grains).

3. The maximum dose of sodium cacodylate, hypodermically, would appear to be 0.13 gm. (2 grains). According to the experiments of Dawes and Jackson (THE JOURNAL, June 22, 1907, page 2090), sodium cacodylate appears to have only a very slight toxic action. They found that 0.5 gm. did not kill a rabbit, while 0.8 gm. did. The toxic dose of salvarsan has been estimated to be 0.15 gm. per kilo, which would correspond to 10.5 gm. for a man weighing 70 kilo. The maximum dose of salvarsan may be put at 0.6 gm., although possibly more might be given without serious results. A dose above 0.6 would, however, be attended with risks.

4. This question cannot be answered positively at present. The important question is, rather, how much arsenic becomes available to the system without danger to the patient. In the case of sodium cacodylate at any rate, it is probably only the arsenic which is reduced to the inorganic form that is therapeutically active.

JOURNALS ON OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY

To the Editor:—Please inform me as to the best eye, ear, nose and throat journals for a specialist.

C. W. BANKES, Reading, Pa.

ANSWER.—The following are representative journals:

Annals of Ophthalmology, Mermod-Jaccard Bldg., St. Louis; quarterly; $4 a year; with *Annals of Otology, Rhinology and Laryngology,* $7 a year.

Annals of Otology, Rhinology and Laryngology, Mermod-Jaccard Bldg., St. Louis; quarterly; $4 a year.

Archives of Ophthalmology (Am. ed.), New Rochelle, N. Y., bimonthly, $5 a year.

Journal of Laryngology, Rhinology and Otology, Bartholomew Close, London, E. C., England; monthly; $5 a year, including postage.

Journal of Ophthalmology and Oto-Laryngology, 100 State St., Chicago; monthly; $2 a year.

Laryngoscope, 3858 Westminster Place, St. Louis; monthly; $3 a year.

Ophthalmic Record, 72 Madison St., Chicago; monthly; $40 a year.

Ophthalmology, 411 White Bldg., Seattle, Wash.; quarterly; $5 a year.

REQUEST FOR SPECIMENS FROM CASES OF HYPERTHYROIDISM

To the Editor:—I am anxious to obtain specimens of tissue from those dead of hyperthyroidism (exophthalmic goiter) with a view to securing more definite and accurate knowledge concerning the tissue changes induced by hyperthyroidism. Portions of heart muscle, liver, pancreas, kidneys, suprarenals and pituitary gland are especially desired. Tissue from patients dying without operative measures of any kind are preferred. I would greatly appreciate any such specimens sent me together with a concise statement of the case, and will gladly remit postage for their carriage. The fresh specimens should be covered with a proper preserving fluid and placed in a mailing-case, which I will supply on request.

JOHN D. SINGLEY, 812 North Highland Ave., Pittsburg, Pa.

The Public Service

Medical Department, U. S. Army

Changes for the week ended Jan. 21, 1911.

Dade, Waller H., M.R.C., and Patterson, Edwin W., M.R.C., relieved from duty in the Philippines division and will proceed from Manila, P. I., about May 15, to San Francisco, for further orders.

Wilson, William H., major; Lewis, William F., major; Duncan, Louis C., captain; Brewer, Issac W., M.R.C., and Smith, Herbert H., M.R.C., relieved from duty in the Philippines division and will proceed from Manila, P. I., about July 15, 1911, to San Francisco, for further orders.

Kirkpatrick, Thomas J., major; Coffin, Jacob M., captain, and Tuttle, Arnold D., lieutenant, relieved from duty in the Philippine division and will proceed from Manila, P. I., about Aug. 15, 1911, to San Francisco, for further orders.

The following named officers of the Medical Reserve Corps are relieved from duty at the stations designated after their names and will proceed at the proper time to San Francisco and take the transport to sail May 5, 1911, for duty in the Philippines division: Baker, Charles L., first lieutenant, presidio of San Francisco; McCown, Thomas B., first lieutenant, Fort Barrancas, Fla.

The following named officers are relieved from duty at the station after their names and will proceed at the proper time to San Francisco and take the transport to sail from that place about June 5, 1911, for duty in the Philippine division: Lynch, Charles, major, office of the surgeon-general; Roberts, William M., major, Fort Thomas, Ky.; Bastion, Joseph E., lieutenant, Company C., Hospital Corps, Walter Reed General Hospital, Takoma Park, D. C.; Austin, Thomas C., Company B, Hospital Corps, Army General Hospital, San Francisco; Wheate, J. Marshall, M.R.C., Fort Lincoln, N. Dak.; Mills, Frederick H., M.R.C., Fort Missoula, Mont.

The following named officers are relieved from duty at the stations after their names and will proceed at the proper time to San Francisco and take the transport to sail from that place about July 5, 1911, for duty in the Philippines division: Deshon, George D., major, Army and Navy General Hospital, Hot Springs, Ark.; Haverkamp, Charles W., lieutenant, Company A, Hospital Corps, Fort D. A. Russell, Wyo.; Reynolds, Royal, lieutenant, Company B, Hospital Corps, Army General Hospital, San Francisco; Bell, Leonard P., M.R.C., Fort Riley, Kan.

The following named officers are relieved from duty at the stations after their names and will proceed at the proper time to San Francisco and take the transport sailing from that place about August 5, for duty in the Philippines division: Stark, Alexander N., major, Fort Adams, R. I.; Wolfe, Edwin R., major, Medical Supply Depot, New York City; Gosman, George H. R., major, Fort Barrancas, Fla.; Cooper, Wibb E., lieutenant, Company A, Hospital Corps, Fort D. A. Russell, Wyo.; Brown, Polk D., M.R.C., Fort Sam Houston, Texas.

Carr, William B., lieutenant, left from temporary duty, Fort Myer, Va., on ten days' leave of absence.

Lamble, John S., Jr., lieutenant, relieved from duty as surgeon of the transport Sherman on arrival at San Francisco, about Sept. 12, 1911, and will then report to the adjutant general of the Army for further orders.

Schlanser, Adam E., lieutenant, relieved from duty with Company C, Hospital Corps, Walter Reed General Hospital, Takoma Park, D. C., and ordered to Fort Shafter, H. T., for duty on transport sailing from San Francisco about July 5, 1911.

Smith, William H., lieutenant, relieved from duty at Fort Shafter, H. T., and on arrival in Honolulu of the transport to sail from Manila about August 5 will proceed on that transport to San Francisco and report to the adjutant general of the Army for further orders.

Hayne, James A., M.R.C., on departure 3d Battalion, 2d Infantry, from Fort Assiniboine, Mont., will proceed to his home, and on arrival there will report by telegraph to the adjutant general of the Army. Lieutenant Hayne will stand relieved from further active duty in the Medical Reserve Corps, to take effect on his arrival at his home.

Deshon, George D., major, ordered to Washington, D. C., on April 3, 1911, for examination for promotion.

Kilbourne, E. D., captain, on arrival at San Francisco will proceed to Columbus Barracks, Ohio, for duty.

Morse, Charles F., captain, on arrival at San Francisco will proceed to the Army General Hospital, San Francisco, for duty.

Scott, George H., captain, on expiration of his present leave of absence will proceed to the Army General Hospital, Fort Bayard, N. Mex., for duty.

Clarke, Joseph T., major, relieved from duty at Fort Crook, Neb., and ordered to Vancouver Barracks, Wash., for duty.

Dale, Frederick A., major, relieved from duty at Fort Lincoln, N. Dak., and ordered to Fort Crook, Neb., for duty.

Brechemin, Louis, Jr., captain, relieved from duty at the Army General Hospital, San Francisco, and ordered to Fort Lincoln, N. Dak., for duty.

Rukke, Guy V., lieutenant, relieved from duty at the Army General Hospital, San Francisco, and ordered to Jefferson Barracks, Mo., for duty.

Bloombergh, H. D., captain, on arrival at San Francisco will proceed to Fort Yellowstone, Wyo., for duty.

Fife, James D., captain, granted two months' leave of absence.

Stone, Frank P., D.S., will proceed from Hobart, Okla., to the presidio of Monterey, Cal., for duty.

McCornack, C. C., lieutenant, left Vancouver Barracks, Wash., for duty at target range near Proebsted, Wash.

Clark, John A., captain, ordered to proceed to West Point, N. Y., for temporary duty.

Fauntleroy, P. C., major, relieved from duty at Fort Benjamin Harrison, Ind., May 1, 1911, and will proceed to New York City to familiarize himself with the methods pursued in the Medical Supply Depot in the purchase and inspection of supplies. He will proceed from New York June 1, 1911, to St. Louis and relieve Major Henry D. Snyder as medical supply officer in that city. Major Snyder after being relieved will proceed to New York City and assume charge of the Medical Supply Depot in that city, relieving Major Edwin P. Wolfe, Medical Corps.

Medical Corps, U. S. Navy

Changes during the week ended Jan. 21, 1911.

Rennie, W. H., P. A. surgeon, detached from the naval hospital, Annapolis, Md., and ordered to duty at the naval hospital, Boston.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended Jan. 18, 1911.

Cofer, L. E., assistant surgeon-general, directed to report to the chairman of board of medical examiners at Washington, D. C., for examination to determine his fitness for promotion to the grade of surgeon.

Wertenbaker, C. P., surgeon, reassigned for duty at Norfolk, Va., effective Dec. 26, 1910.

Young, C. B., surgeon, detailed to represent the service at the annual meeting of the Association of American Medical Colleges at Chicago, Feb. 27-28, 1911.

Cumming, Hugh S., P. A. surgeon, directed to proceed to Washington, D. C., and report to chairman of board of medical examiners for examination to determine his fitness for promotion to the grade of surgeon.

McMullen, John, P. A. surgeon, granted seven days' leave of absence from Jan. 13, 1911.

Foster, M. H., P. A. surgeon, granted fifteen days' leave of absence from Jan. 21, 1911.

Lumsden, L. L., P. A. surgeon, directed to return to Washington, D. C. via St. Paul, Minn., for conference with State Board of Health.

Schereschewsky, J. W., P. A. surgeon, directed to proceed to Washington, D. C., and report at bureau for conference.

Francis, Edward, P. A. surgeon, directed to proceed to New York and Otisville, N. Y., on special temporary duty.

Burkhalter, J. T., P. A. surgeon, leave of absence for one month from Dec. 17, 1910, amended to read twenty-eight days from Dec. 17, 1910.

Frost, M. H., P. A. surgeon, directed to proceed to Albany, N. Y., on special temporary duty.

Moncure, J. A., A. A. surgeon, granted ten days' extension of leave of absence from Jan. 1, 1911, on account of sickness; granted fifteen days' leave of absence from Jan. 11, 1911.

Schuster, B. L., A. A. surgeon, granted nine days' leave of absence from Jan. 11, 1911.

Board of medical officers convened to meet at the Bureau, Jan 23, 1911, for the examination of Assistant Surgeon-General L. E. Cofer and Passed Assistant-Surgeon Hugh S. Cumming, to determine their fitness for promotion to the grade of surgeon. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General J. D. Long; Passed Assistant-Surgeon Joseph Goldberger, recorder.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

IOWA: State House, Des Moines, February 14-16. Sec., Dr. Guilford H. Sumner.

KANSAS: Topeka, February 14. Sec., Dr. H. A. Dykes, Lebanon.

NEBRASKA: State House, Lincoln, February 8-9. Sec., Dr. E. Arthur Carr.

NEW YORK: New York City, Albany, Syracuse and Buffalo, January 31 to February 3. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

Colorado October Report

Dr. S. D. VanMeter, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, Oct. 4-8, 1910. The number of subjects examined in was 8; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 16, of whom 15 passed and 1 failed. Twenty-nine candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Denver and Gross College of Medicine, (1910)* 81, 82.9, 83.7, 84.4.	(1910)	77.9, 80.6,
University of Colorado, (1910) 77.4, 79.5, 85.5.		
Rush Medical College	(1910)	85.4
University of Louisville	(1910)	78
Ohio-Miami Medical College	(1910)	88.7
Vanderbilt University	(1909)	83.9, 83.9

FAILED College	Year Grad.	Per Cent.
St. Louis College of Physicians and Surgeons	(1906)	70.6

REGISTERED ON CREDENTIALS College	Year Grad.	State Licenses
Rush Medical College, (1894) Indiana;	(1895)	Iowa
Northwestern University Medical School	(1891)	Kansas
College of Phys. and Surgeons, Chicago (1893)	(1899)	Illinois
Central College of Phys and Sur., Indianapolis	(1905)	Indiana
University of Iowa, College of Medicine	(1890)	Iowa
University of Kansas	(1906)	Kansas
Louisville Medical College	(1885)	Kentucky
College of Physicians and Surgeons, Baltimore.	(1897) (1900)	W. Virginia Penna.
Baltimore University, (1896) Ohio;	(1903)	Penna
University of Missouri	(1908)	Missouri
St. Louis College of Physicians and Surgeons	(1891)	Missouri
Kansas City Medical College	(1897)	Kansas
Missouri Medical College	(1898)	Missouri
St. Louis University	(1905)	Illinois
University of Nebraska, Homeopathic Dept.	(1886)	Ohio
University of Nebraska, College of Medicine	(1907)	Nebraska
Columbia University, College of Phys. and Sur.	(1870)	Illinois
University of Wooster	(1890)	Ohio
Pulte Medical College	(1884)	Kansas
Miami Medical College	(1907)	Ohio
Starling Medical College	(1888)	Ohio
Hahnemann Medical College and Hospital, Phil.	(1897)	Penna.
Medico-Chirurgical College, Philadelphia	(1908)	Penna.
University of Tennessee	(1892)	Tennessee
University of Vermont	(1904)	Vermont

* No grade given.

Georgia October Report

Dr. I. H. Goss, secretary of the Regular Board of Medical Examiners of the State of Georgia, reports the written examination held at Atlanta, Oct. 11-12, 1910. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 80. The total number of candidates examined was 32, of whom 26 passed and 6 failed. Ten candidates were licensed through reciprocity and 1 under the exemption clause. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Birmingham Medical College, (1908) 89;	(1910)	86
George Washington University	(1906)	99
Howard University, Washington, D. C. (1907) 81;	(1909)	83.5
Tulane University of Louisiana, (1910) 88, 89,		89.5
Flint Medical College	(1910)	85.5
University of Maryland	(1910)	83
Leonard School of Medicine, (1910) 81.5, 82.5, 83,		83
Columbia University, College of Phys. and Sur.	(1906)	91
Medical College of the State of South Carolina	(1910)	83
University of the South. (1901) 87.5; (1906) 88;	(1908)	80
University of Nashville	(1910)	83.5
Meharry Medical College, (1908) 83.5;	(1910)	82.5
Chattanooga Medical College	(1910)	84.5
Vanderbilt University	(1910)	81
Gate City Medical College	(1903)	85
Marquette University, Milwaukee	(1919)	89.5

FAILED College	Year Grad.	Per Cent.
Leonard School of Medicine, (1905) 77;	(1910)	78
Meharry Medical College, (1907) 75;	(1910)	72
Chattanooga Medical College	(1905)	74.5
Knoxville Medical College	(1908)	74.5

LICENSED THROUGH RECIPROCITY College	Year Grad.	Reciprocity with
University of Louisville	(1876)	Kentucky
Johns Hopkins University	(1907)	Maryland
University of Pennsylvania	(1870)	Tennessee
Vanderbilt University	(1901)	Tennessee
Tennessee Medical College	(1904)	Tennessee
University of Nashville	(1909)	Tennessee
Meharry Medical College	(1902)	Iowa
Chattanooga Medical College	(1909)	Tennessee
University College of Medicine, Richmond	(1907)	Virginia
McGill University, Montreal	(1910)	Maine

LICENSED UNDER THE EXEMPTION CLAUSE College	Year Grad.
Southern Medical College, Atlanta	(1889)

Florida November Report

Dr. J. D. Fernandez, secretary of the Florida Board of Medical Examiners, reports the written examination held at Palatka, Nov. 9-10, 1910. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 66, of whom 56 passed and 10 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
University of Alabama, (1909) 75, 90;	(1910) 75, 75.1	81
Atlanta School of Medicine, (1909) 81, 87;	(1910)	78, 84
Medical College of Georgia, (1900) 83;	1906	75
Atlanta College of Physicians and Surgeons, (1909) 85; 75, 75, 75, 75, 80.6, 87.	(1910) 75,	
Howard University, Washington, D. C.	(1910)	86.3
Rush Medical College	(1892)	84
Northwestern University Medical Coll. (1889) 83;	(1901)	96
Louisville National Medical College	(1910)	77
Tulane Univ. of Louisiana, (1909) 75;	(1910) 82, 85, 87, 91, 91	
Medical School of Maine	(1897)	87
University of Maryland, (1909) 87;	(1910)	87
Harvard Medical School	(1887)	80
University of Michigan, Dept. of Med. and Surg.	(1910)	82
Barnes Medical College	(1910)	75
Missouri Medical College	(1897)	78
University of Nebraska	(1903)	87
Albany Medical College	(1877)	91
Leonard School of Medicine	(1910)	79
Medico-Chirurgical College of Philadelphia	(1904)	85
University of Peansylvania (1882) 88; (1902) 84;	(1910)	83
Memphis Hospital Medical College	(1910)	89
Vanderbilt University, (1887) 80;	(1908)	81
Medical Coll. of the State of South Carolina, (1909) 75;	(1910)	81
Meharry Medical College, (1901) 75; (1908) 76.4;	1909)	80
University of Nashville, (1909) 88;	(1910)	75
University College of Medicine, Richmond	(1909)	90
Medical College of Virginia, Richmond	(1908)	85

FAILED College	Year Grad.	Per Cent.
Atlanta School of Medicine	(1910)	65
Atlanta College of Physicians and Surgeons, (1905) 63; 56; (1910) 56.1	(1909)	
Indiana Medical College	(1908)	64
Kentucky University	(1906)	68.6
Creighton Medical College	(1910)	60
Medical Coll. of the State of South Carolina, (1909) 65;	(1910)	52
University of Tennessee	(1909)	58.6

Nevada November Report

Dr. S. L. Lee, secretary of the Nevada State Board of Medical Examiners, reports the written examination held at Carson City, November 7-9, 1910. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 9, all of whom passed. Seven candidates were licensed through reciprocity. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Cooper Med. College, San Francisco, (1904) 82.9;	(1910) 84.8, 87.8	
Northwestern University Medical School	(1894)	78.9
Rush Medical College	(1893)	78.2
College of Physicians and Surgeons, Chicago	(1893)	83.2
Johns Hopkins University	(1908)	88.2
University of Würzburg, Germany	(1892)	89.4
University of Naples, Italy	(1893)	83.9

LICENSED THROUGH RECIPROCITY College	Year Grad.	Reciprocity with
Rush Medical College	(1905)	Illinois
University of Maryland	(1895)	Maryland
University of Michigan, (1890) Nebraska;	(1893)	Minnesota
Marion-Sims College of Medicine	(1902)	Illinois
Cincinnati College of Medicine and Surgery	(1884)	Michigan
Jefferson Medical College	(1894)	Nebraska

Book Notices

A MANUAL OF MIDWIFERY. For Students and Practitioners. By Henry Jellett, M.D., King's Professor of Midwifery in the School of Physic, Trinity College, Dublin. With the Assistance in Special Subjects of W. R. Dawson, M.D.; H. C. Drury, M.D.; T. G. Moorhead, M.D., and R. J. Rowlette, M.D. Second Edition. Cloth. Price, $6 net. Pp. 1210, with 557 illustrations. New York: William Wood & Co., 1910.

The improvements in this edition consist in important changes in the illustrations as well as in the text. A complete new set of drawings illustrates the chapter on obstetric anatomy and also the application of forceps, pubiotomy and Cesarean section, as well as the mechanism of labor. The anatomy and pathology of eclampsia, hyperemesis gravidarum, extra-uterine pregnancy, chorio-epithelioma and surgical fevers of childbed have been revised by Dr. Rowlette, pathologist to the Rotunda Hospital. New matter has been added and the text generally revised.

The book may be commended without hesitation as one of the best text-books on obstetrics in the English language. It is well arranged, complete, clearly written, up to date and well illustrated.

The chapters on obstetric anatomy, and especially those on the ovum and fetus, are concise but clear. One regrets only the absence of a method of determining and denoting the station of the fetus in its passage through the obstetric canal.

In the chapter on obstetric asepsis and antisepsis, the author is rather more dogmatic in denying the possibility of auto-infection than is justified. The rules for the prevention of sepsis are very good, but the statement is somewhat surprising that for a douche "in private practice it is seldom possible to obtain sterilized water, and consequently we must use the next best substitute, which will be furnished by water to which an antiseptic has been added." Why a vaginal douche should be given with the patient in the awkward lateral position is also difficult for an American to understand.

In the most excellent chapter on the physiology of labor we would dissent only from the author's preference for chloroform to ether in all degrees of anesthesia. Those who have used ether will not agree that it has any disadvantages compared with chloroform, while recent investigations show that chloroform may have remote toxic effect on the fetus or child as well as on the mother.

We are disappointed to find the important subject of exercise practically ignored in the discussion of the physiology of the puerperium and definite directions in regard to getting out of bed omitted. Considerable attention has been given in the last ten years in America and Germany to the importance of a proper management of the puerperium in order to obviate the results of imperfect involution of the uterus and ligaments and the abdominal wall, including the frequent occurrence of enteroptosis. This subject is well worth the attention of our English and Irish colleagues.

In the numerous important subjects of pathology of pregnancy, labor and the puerperium, the author gives clear pictures of the pathologic conditions and describes his own and other methods of treatment, with satisfactory definitions. It is not possible to describe, in the short limits of a review, the views of the author on even the most important subjects as for example, placenta prævia, accidental hemorrhage, etc. In general, it may be said that the reader will follow the clear presentation of the subjects with much interest and find the methods of treatment safe and in accordance with the present state of obstetric science.

A PRACTICAL GUIDE TO THE NEWER REMEDIES. By J. M. Fortescue-Brickdale, M.D., Physician to Clifton College. Cloth. Price, $2 net. Pp. 273. New York: William Wood & Co., 1910.

The author makes a comparison and an estimate in the light of experience of the merits of the newer remedies; classifies the remedies discussed on the principle that they have been introduced as substitutes for already well-known remedies, in order to overcome the obvious disadvantages of some of these. With few exceptions, the numerous synthetic remedies introduced in the last few decades have not embodied any new therapeutic actions, but have merely presented the essential principles of the older remedies in a new form. In some cases the advantage has been illusory, since the new combination has only the effects of a mixture and its advantages could have been secured by administering the individual ingredients of the new compound.

These facts are set forth by the author, and he takes pains to point out in several cases that the synthetics possess no real advantage over the simpler and older remedies. Thus the various substitutes for the iodids are described in some detail; the author points out that many of these substitutes contain only a small amount of iodin and hence cannot be used to secure a powerful and rapid effect, so that "unless intolerance is well marked, there does not seem to be any reason for adopting a method of administration, the object of which is, in fact, to obtain a minimal dosage." He does not, however, agree with Ehrenmeyer and Stein that the organic iodin compounds possess no advantage at all.

Still less credit is given to the bromid substitutes, as the author says: "None of these preparations present any real advantage over the alkaline bromids; any tendency to irritate the stomach in the latter can always be met by prescribing a sufficiency of water." The arsenic, sulphur, phosphorus and iron compounds are critically considered and the advantages of some of the newer preparations admitted. The inefficacy of intestinal antiseptics as a class and of the uric acid solvents is emphasized. Throughout the book the reader is impressed with the occasional grain of wheat which is to be secured from the winnowing of much chaff, and the need of conservatism is clearly shown. This shifting of the claims of manufacturers, often too optimistic, is a difficult task which seems to have been satisfactorily performed. The book is free from technicalities and no time is wasted in useless description. These very desirable qualities recommend the work to the favorable consideration of every student and practitioner of medicine.

DISEASE OF THE PANCREAS. Its Cause and Nature. By Eugene L. Opie, Professor of Pathology, Washington University, St. Louis. Second Edition. Cloth. Price, $3. Pp. 387, with 47 illustrations. Philadelphia: J. B. Lippincott Co., 1910.

Since the first edition of this book appeared in 1903, extensive studies of the pancreas have cleared up many of the moot questions concerning this important organ. Many points in the histology, and even the anatomy, have been made clearer, and the secretions, both internal and external, are better understood, as well as many of the pathologic conditions which affect this organ, notably hemorrhagic and other forms of pancreatitis; the formation of cysts; tuberculosis and syphilis; the relation of the pancreas to carbohydrate metabolism and diabetes mellitus, as well as the relation of the hepatic function and the gall-ducts to pancreatic disease. All of this is reflected in this new edition. This greater knowledge has brought the pancreas more within the domain of the surgeon, and the organ is now much more frequently attacked surgically. The author still adheres to his theory that the essential lesions in diabetes mellitus is in the islands of Langerhans. He feels that this point has now been established, both by his own experiments and by the work of others, which he cites, the disease occurring when this portion of the organ is affected, just as though the whole organ were extirpated. The author is not dogmatic on this point, but gives the evidence on both sides. He draws freely from the literature concerning the pancreas, giving a bibliography that very well covers the whole field. The book is well illustrated. The work is authoritative, and an extremely interesting one on a subject in which great progress has been made, but which is not yet entirely cleared up.

DIE WASSERMANN'SCHE REAKTION. Mit besonderer Berücksichtigung ihrer klinischen Verwertbarkeit. Von Dr. Harald Boas, Privatdozent an der Universität. Mit einem Vorwort von Prof. A. Wassermann. Paper. Price, 5.60 marks. Pp. 186. Berlin: S. Karger, 1911.

In his preface, Professor Wassermann emphasizes the fact that the results given by Boas correspond very closely with the results obtained by himself. The technical reliability of the results published by Boas would seem to be well established and the conclusions drawn on the basis of the results thus obtained consequently acquire great force. The conviction arises, as one looks over these results, that at the present time repeated Wassermann tests are necessary in order to determine whether the patient really is cured or whether he simply has passed

into a stage of latency, and that persistent positive reactions indicate the presence of spirochetes. If full advantage is taken of the test, large numbers of cases of latent syphilis should be discovered and the patients probably cured; the great benefit thus obtainable is easily understood when we call to mind the number of women who know nothing of their syphilitic infection, the importance of protecting nurslings against the effects of hereditary syphilis, and against infection by wet-nurses, etc. The Danish government has recognized these highly important practical aspects of the Wassermann test and there has been organized a complete serodiagnostic service for physicians in the State Serum Institute at Copenhagen. The book is to be highly recommended.

FOOD AND FEEDING IN HEALTH AND DISEASE. A Manual of Practical Dietetics. By Chalmers Watson, M.D., Assistant Physician, Royal Infirmary, Edinburgh. Cloth. Price, 10 shillings 6 pence. Pp. 638, with illustrations. New York: William Wood & Co., 1910.

The fine summary of the general principles of nutrition and of the physiology of digestion, absorption and metabolism that appears in the initial chapters of this book is to be unreservedly commended. The author has not adopted the modern classification of foods, but retains the old classification—"animal and vegetable" foods. Because of this there is no symmetrical harmony between his food-classes and food-uses. The work is thoroughly abreast of the latest and best investigations in its presentation of the physiologic effects of alcohol on the animal body, as well as the therapeutic uses of that substance.

The detailed and just treatment of the matter of patent, proprietary and predigested foods will appeal to the practitioner and will be valuable to him for reference. Especially valuable will the practitioner find the chapter on "Diet at Different Periods of Life" (childhood, school age, old age, pregnancy). The chapters on infant-feeding are excellent. While there is nothing noteworthy in that part of the work devoted to diet in disease, it is up to date and reliable. The republication in the appendix of reports of the author's researches on meat diet is a novel feature in such a book and adds much to its value.

GEHIRN UND RÜCKENMARK. Leitfaden für das Studium der Morphologie und des Faserverlaufs. Von Dr. med. Emil Villiger, Privatdozent für Neurologie und Neuropathologie an der Universität Basel. Second Edition. Cloth. Price, 12.80 marks. Pp. 278, with 224 illustrations. Leipzig: Wilhelm Engelmann, 1910.

This work gives in a brief yet fairly detailed form the information and illustrations generally divided between an atlas and a text-book on the anatomy of the brain and cord. Part I is devoted to morphology, or rather topographic anatomy; Part II to the course of the different fiber tracts. Most of the illustrations are schematic and clear; at the end of the book there are forty-nine full-page reproductions of sections through the brain-stem, at suitable intervals, from the genu of the callosum to the caudal end of the bulb. Only the normal brain and cord are considered, not the peripheral nerves or pathologic conditions. The clear text, everywhere illustrated by schematic drawings, will recommend the book to the student or physician looking for elementary information, and the anatomist or neuropathologist will secure the work on account of the serial sections mentioned.

HINTS FOR THE GENERAL PRACTITIONER IN RHINOLOGY AND LARYNGOLOGY. By Dr. Johann Fein, Privatdocent at the University of Vienna. Translated by J. Bowring Horgan, M.B., Late House Surgeon at the Hospital for Diseases of the Throat, Golden Square, London, W. Cloth. Price, $1.50. Pp. 223, with 42 illustrations. New York: Rebman Co., 1910.

In this brief work the author, without attempting to make either a text-book or a work of reference, has drawn from his large experience as a clinician and teacher in his special line, and has given much useful information for the general practitioner in the affections of these special regions which come clearly within his province. He attempts to draw rather distinct lines between the diseases which the general practitioner may treat and those which belong to the specialist. Though there may be differences of opinion as to the methods of handling the various troubles, yet the principles laid down in the diagnosis and treatment are practical, and the book will be of very material assistance to the general practitioner. It is well illustrated, and the translation has been well done.

ANDREAS VESALIUS, THE REFORMER OF ANATOMY. By James Moores Ball, M.D. Paper. Price, $5. Pp. 149, with illustrations. St. Louis: Medical Science Press, 1910.

This work, evidently the result of much painstaking and industrious study, contains an account of the life and works of Vesalius himself, and a survey of medical science up to his time, with brief sketches of earlier and contemporary anatomists. The book is typographically attractive, and is illustrated with excellent reproductions of curious and interesting old engravings. It is doubtless through inadvertence rather than error that the author refers to the Emperor Charles V as the "Spanish emperor," and as "Charles V of Spain." Charles was German in disposition, education and appearance and only half a Spaniard by descent, while as sovereign of Spain, of course, he was Charles I, not Charles V.

THE MICROSCOPICAL EXAMINATION OF FOODS AND DRUGS. A Practical Introduction to the Methods Adopted in the Microscopical Examination of Foods and Drugs, in the Entire, Crushed and Powdered States. By Henry G. Greenish, F.I.C., Professor of Pharmaceutics to the Pharmaceutical Society of Great Britain. Second Edition. Cloth. Price, $3 net. Pp. 386, with 209 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

This, the second edition of this well-known and popular text, is the same as the first, with the exception of the addition of a chapter on the more commonly occurring adulterants of powdered foods and drugs, and the addition of descriptions of saffron, almond and fennel fruit, licorice and calumba. This edition is supplemented by a brief general scheme of examination, which should prove a desirable addition. The work is well illustrated.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

A NEW PUBLIC HEALTH BILL IN CONGRESS

On January 5 Mr. Mann introduced the following bill in the House of Representatives. This bill is H. R. 30292. A similar bill has been introduced in the Senate by Senator Martin of Virginia as S. 9909:

A BILL: To change the name of the Public Health and Marine-Hospital Service to the Public Health Service, to increase the pay of officers of said service, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Public Health and Marine-Hospital Service of the United States shall hereafter be known and designated as the Public Health Service, and all laws pertaining to the Public Health and Marine-Hospital Service of the United States shall hereafter apply to the Public Health Service, and all regulations now in force, made in accordance with law for the Public Health and Marine-Hospital Service of the United States shall apply to and remain in force as regulations of and for the Public Health Service until changed or rescinded. The Public Health Service may study and investigate the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and sewage and the pollution either directly or indirectly of the navigable streams and lakes of the United States, and it shall from time to time issue information in the form of bulletins and otherwise for the use of the public.

SEC. 2. That beginning with the first day of July next after the passage of this act the salaries of the commissioned medical officers of the Public Health Service shall be at the following rates per annum: surgeon-general, $6,000; assistant surgeon-general, $4,000; senior surgeon, of which there shall be ten in number, on active duty, $3,500; surgeon, $3,000; passed assistant surgeon, $2,400; assistant surgeon, $2,000; and the said officers, excepting the surgeon-general, shall receive an additional compensation of 10 per cent. of the annual salary as above set forth for each five years' service, but not to exceed in all 40 per cent.: Provided, That the total salary, including the longevity increase, shall not exceed the following rates: assistant surgeon-general, $5,000; senior surgeon, $4,500; surgeon, $4,000: Provided further, That there may be employed in the Public Health Service such help as may be provided for from time to time by Congress.

PUBLIC HEALTH EXHIBITS UNDER THE SUPERVISION OF THE AMERICAN MEDICAL ASSOCIATION

Frank B. Wynn, A.M., M.D.
INDIANAPOLIS

In the field of preventive medicine, no method of instructing the laity on hygienic and sanitary questions has proved more effective than well-conducted exhibits. For several years the Committee on Scientific Exhibit of the American Medical Association has sought in various ways to stimulate the development of model public health exhibits. Considerable study has been given to exhibits of this character, leading to the conclusion that as ordinarily devised and conducted they are open to the following objections:

1. They are cumbersome, heterogeneous and often unsystematic in arrangement.
2. Their initial cost is large; and the expense of installing, housing and supervision is great.
3. They are available only for cities.
4. The exhibition is spasmodic: they are shown for only a day or two in a community.

Fig. 1.—Public health exhibit for placing in postoffices and other public places.

Fig. 2.—A public health bulletin, medium size.

PERMANENTLY INSTALLED PUBLIC HEALTH EXHIBITS

To overcome the above objections it has been sought to devise cheap, compact, and durable health exhibits for permanent installation in public places, such as railway stations, court-houses, post-offices, and the like, where people come and go. I have designed four models which were shown in the Scientific Exhibit at the St. Louis meeting.

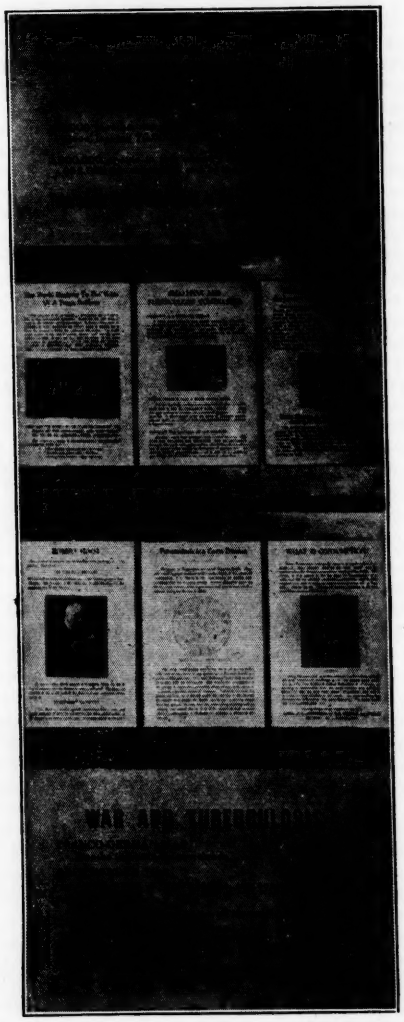

Fig. 3.—Portable, folding tuberculosis charts for use in lectures, etc.

Model 1.—Small Wall Exhibit (Fig. 1).—Cost, $15. May be fastened to any wall. Material, galvanized iron and tin; enamel or gun-metal finish; printed matter varnished to make it durable and sanitary. Dimensions, 9 by 30 inches. Contains thirty removable, hinged leaves on which are mounted sixty pictures, charts, and data relating, in this particular cabinet, to tuberculosis. While tuberculosis is made the standing issue of public instruction, the "tuberculosis" sign at the top may be slid out and a "typhoid" sign introduced, substituting at

the same time a group of leaves relating to the latter. In this way a local health officer may at any time inaugurate a campaign of instruction on a prevailing epidemic. Fifty of these small exhibits have been installed in public places about the city of Indianapolis, by the Department of Public Health.

These small exhibits are particularly well adapted for use in village railway stations or post-offices. Their small cost enables their purchase by clubs, medical societies, and health authorities. The price quoted might be still further reduced if they were made in large numbers.

Model 2.—Medium-Sized Wall Cabinet (Fig. 2).—Cost, $20. Material, same as foregoing. Dimensions 24 by 30 inches. Designed for larger railway stations, court-houses, etc. The leaves are arranged in three groups in order to permit simultaneous inspection by several persons. It is intended that the central group should be devoted to tuberculosis; the lateral ones to other sanitary and hygienic topics. Small compartments for models of shacks, etc.

Model 3.—Large Octagonal Cabinet.—Cost, $100. Mounted on a pedestal. Same materials as in the foregoing. Designed especially for large railway stations, or any public place where large numbers of people congregate. Contains models of shacks, sanitary cuspidors, etc. Removable hinged leaves on all sides.

Model 4.—Compact Portable Exhibit (Fig. 3).—Cost, $15. This consists of enameled metallic leaves 13 by 20 inches, which are hinged in groups of four or more, and may be dropped from a picture molding in a minute's time. These may be used in connection with oral presentations, or they may be permanently installed; especially adapted to hanging on the walls in school buildings. The tuberculosis set contains twenty-four leaves.

ADVANTAGES OF THE PLAN OF PUBLIC HEALTH EXHIBITS UNDER THE ASSOCIATION CONTROL

1. Compactness, neatness and stability: They take up but little room and may be placed with safety in any public building where crowds assemble.

2. Completeness: Although compact, they contain as much as the large exhibits—all that is necessary for the instruction of the public.

3. No supervision required. They tell their own story graphically.

4. Continuity of educational effort: The lessons of hygiene and sanitary science are taught day by day.

5. Exhibits do not arouse local jealousies and criticisms from the profession; nor is there risk of bungling public presentation.

6. Supervision of the data by the Association would insure sane and judicious instruction of the laity on public health problems.

PROBLEM OF PRODUCTION

In order to secure the widest possible educational effect from such exhibits, it is desirable that they be sold at the lowest possible figure, thus insuring general use. It lies within the power of the Association to develop cheap, compact and yet complete exhibits relating to all the problems of the public health, and this it undoubtedly will do. It would be possible in this way to standardize to a large extent public health methods throughout the country. The wise hand of the Association would guard against erratic efforts in the field of preventive medicine, and seek on every hand to cooperate with and aid existing forces working for the public health and comfort.

[A number of the tuberculosis exhibits have been made up by Clark and Roberts Co., 315 Holton Place, Indianapolis, Ind. Single cabinets (Model 1) will be furnished for $15.00, or in lots of one to four dozen at $12.00 each. Larger quantities at a reduction. These prices do not include freight or express charges. Orders may be sent direct to the maker or to the Secretary, Council on Health and Public Instruction, American Medical Association, 535 Dearborn Avenue, Chicago. The purchase of these exhibits is strongly recommended to state and municipal boards of health, women's clubs, county medical societies and local health leagues.]

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Sixth Month—Fourth Weekly Meeting

SURGICAL SHOCK

PHYSIOLOGY OF SHOCK: Vascular shock, cardiac shock. Depression or inhibition. Relation of cardiac and vascular shock. Blood-pressure in shock. Effect of stimulation of depressor nerve-fibers. Effect of alkaline solutions on experimental shock.

ETIOLOGY OF SHOCK: Sensory impulses in operation, hemorrhage, general anesthesia, extent and duration of operation, heat and cold, psychic influences. Predisposing conditions; anemia, alcoholism, diabetes, nephritis, local and general infections. Traumatism in production of shock.

SYMPTOMS AND DIAGNOSIS OF SHOCK: Pulse, blood-pressure, temperature, perspiration, pallor, respiration, reflexes. Differentiate shock from collapse.

TREATMENT OF SHOCK: Prophylactic: Effect of operative manipulations on organs and tissues; sensibility of different structures. Character and amount of anesthetic. Preparation for anesthetic. Vaso-constrictors: Compression of abdomen and extremities, salt solution, epinephrin.

Monthly Meeting

ANESTHESIA—SURGICAL SHOCK

The Choice of an Anesthetic.
Indications and Contra-Indications for Chloroform and for Ether.
Local Anesthesia in General Surgery.
The Prevention and Treatment of Surgical Shock.

Medicolegal

One Trial for Illegally Practicing Medicine Not a Bar to Another

The Supreme Court of South Carolina, in State vs. Van Buren (68 S. E. R. 568), reverses a judgment sustaining a plea of former jeopardy and acquittal in a prosecution for practicing medicine without the license required by statute. It says that the first indictment, on which the defendant was tried and acquitted, charged that he practiced medicine, without a license, on October 10, and November 5, 1908, by prescribing for the physical ailment of another; while the second indictment charged that, on Oct. 28, 1908, he unlawfully practiced medicine by prescribing for and treating the physical ailments of Mary Crim. The statute contemplates that every violation of its provisions shall be a separate offense. The question was whether it appeared from the faces of the indictments that the offenses charged were the same, so that an acquittal under the first would be a bar to a trial under the second.

It will be observed that the charge in the first indictment was entirely indefinite, except as to the time. No person or place was mentioned, and no circumstances or particular description, except the dates of the alleged offenses. For this reason the time mentioned was a material part of the description of the offense, and it was necessary to prove the dates as alleged. The state, therefore, on the trial under that indictment, was limited in its proof to showing that the defendant practiced medicine without a license on October 10 and November 5, 1908. This being so, it seems perfectly clear that the defendant was never tried and was never acquitted of any charge except that of practicing medicine without a license on the days named. Whether he had practiced on other days in violation of the statute, not being a question in issue, could not have been decided.

The test laid down as useful and generally adequate, though not infallible, by which it may be decided whether two indict-

ments charge the same offense, is: "Would the evidence necessary to support the second indictment have been sufficient to procure a legal conviction on the first?" Apply this test. Obviously evidence to support the second indictment, charging the practice of medicine without a license by prescribing for the physical ailments of Mary Crim on Oct. 28, 1908, could have been introduced which would have been entirely insufficient to produce conviction on the first indictment; for no evidence would have supported the first indictment except evidence of practicing medicine on the days therein named, while the evidence necessary to support the second indictment could have been of practicing medicine by prescribing for Mary Crim on other days than those to which the first indictment was confined. The circuit court, therefore, erred in laying down as a legal inference that the second indictment necessarily charged the same offense as the first.

On a trial on the second indictment no evidence of practicing medicine without a license on the days named in the first indictment would be admissible, because the defendant had been tried for those alleged offenses and acquitted; but he had not been tried for a like offense committed at any other time, and therefore the first trial and acquittal was ineffectual as a plea against the charge alleged in the second indictment to have been committed at a different time.

Private Tuberculosis Sanitariums As Nuisances—Unfounded Fears

The Supreme Court of Washington reverses, in the case of Everett and wife vs. Paschall (111 Pac. R. 879), a decision in which a lower court denied an injunction against the maintenance of a private tuberculosis sanitarium in a residence neighborhood. More particularly, the question, which is thus answered in the negative, was stated to be: "Can a tuberculosis hospital be maintained in a residential portion of a city, where its maintenance depreciates the value of contiguous property from 33⅓ to 50 per cent., and where its existence detracts from the comfortable use of such residential property?"

The lower court went on the principle that, the danger being only in the apprehension of it, a fear unfounded and unsustained by science, a demon of the imagination, the courts would take no account of it. But if dread of the disease and fear induced by the proximity of the sanitarium, in fact, disturbed the comfortable enjoyment of the property of the plaintiffs, the supreme court questions its right to say that the fear was unfounded or unreasonable, when it was shared by the whole public to such an extent that the property values were diminished. The question was, not whether the fear was founded in science, but whether it existed; not whether it was imaginary, but whether it was real, in that it affected the movements and conduct of men. Such fears are actual, and must be recognized by the courts as other emotions of the human mind. That fear is real in the sense indicated, and is the most essentially human of all emotions, there can be no doubt. The theories and dogmas of scientific men, though provable by scientific reference, cannot be held to be controlling unless shared by the people generally.

Besides, the lower court found that the bacilli of the disease might be carried by house flies. Thus every house fly that might drone a summer afternoon in the drawing room or nursery would be a constant reminder to the plaintiffs of their neighbor, tending to disquiet the mind and render the enjoyment of their homes uncomfortable.

The only case the court finds holding that fear alone will not support a decree in this class of cases is Anonymous, 3 Atk. 750, where Lord Hardwicke said: "And the fears of mankind, though they may be reasonable ones, will not create a nuisance." The Washington statute modifies, if indeed it was not designed to change, that rule. Under the facts, the supreme court cannot say that the dread which was the disquieting element upon which the plaintiffs' complaint was made to rest was unreal, imaginary or fanciful. In so doing, it is not violating the settled principles of the law, but affirming them.

Society Proceedings

COMING MEETINGS

American Medical Association: Joint Conference on Medical Education and Medical Legislation, Chicago, March 1-3.
Association of American Medical Colleges, Chicago, February 27-28.
Natl. Confed. of State Med. Exam. and Licng. Bds., Chicago, Feb. 28.

CHICAGO GYNECOLOGICAL SOCIETY

Regular Meeting, held Dec. 16, 1910

The President, DR. G. A. KOLISCHER, in the Chair

Legal Aspects of Post-Mortem Cesarean Section

DR. CHARLES S. BACON: The law of Numa Pompilius, the lex regia, provided that no pregnant woman who died should be buried until her child had been removed from the uterus, if alive. In some countries, Austria, for example, and Germany, the lex regia is still in force. Post-mortem section is required after the sixth month, or after the child is viable. In some countries the decision is left with the physician. In this country there is no statute to cover this point, nor is there a decision on record. Most important is it to decide that the mother is dead, because the law requires that if she is unconscious, consent to operate must be obtained from the husband. A Cesarean section done under such circumstances without the consent of the husband or against his wishes would be actionable. Therefore, it is essential to establish that death has occurred. Next of importance is it to determine whether the fetus is alive or dead. This is by no means always an easy thing to do, because of the position of the fetus, the presence of hydramnion, and thick or edematous abdominal walls. If the heart tones were heard a few minutes before death, post-mortem auscultation may be omitted. That, I believe, may be accepted as a positive and imperative indication for the operation. If evidence of fetal life is lacking, we are still justified in hoping that it exists for a brief period post mortem. Numerous observations have shown that the fetus may live for from fifteen to twenty minutes after the death of the mother. The cause and manner of death of the mother doubtless has considerable bearing on the subject. In order that no chance of saving a life may be lost and to avoid hurting the feelings of relatives and friends, I think that we may safely adopt a limit of twenty-five minutes after death as the longest time that a fetus can live and the latest moment that a section is justifiable. It is hardly necessary to add that the fetal life should be sufficiently developed to give a chance for continued existence. A fetus that could have no hope of living outside of the body of the mother more than a few hours cannot have a reasonable claim. Hence, the section should be made only when the pregnancy has advanced twenty-eight weeks. These two questions, whether the woman is really dead and whether the fetus is alive and viable, are all that need to be considered in establishing a rule of practice or a legal mandate.

As to the legal aspects of this question, I maintain that the operation is right for the following reasons: 1. The husband's right to determine whether an operation shall be performed on his wife ceases with her death. 2. The right of the husband to the custody and control of the body of his dead wife does not extend to preventing such disposal of it as may be necessary to keep it from injuring another human being. There is no property right in the dead body, and any action taken to save life cannot be classed as unlawful. The obligation to save the life of the fetus when it can be done without destroying or jeopardizing another life is absolute. Certain rights have been accorded to the fetus. The law, both statute and common, and its interpretation by the courts, is dependent on the sentiment of the community and registers in a general way the advance in knowledge and morals. This is well illustrated by the history of the laws concerning abortion. Certain civil rights of the infant "in ventre sa mère" have long been recognized, as, for example, in the right to obtain an injunction to "stay waste." More recently a number of cases have been decided in the highest courts in which the decision showed the existence of a tendency to a greater recognition of the legal rights of the fetus. That a viable fetus has the same right to live as any other human being is in accord with moral,

social and scientific laws, and should become a legal proposition. This does not imply that it has greater rights than the mother. If she is endangered by it, she may protect herself, even to the extent of destroying it, just as anyone has the right to self-preservation, when attacked by an irrational person. This rule would require a post-mortem Cesarean section or in rare cases a post-mortem delivery operation through the natural passages in every case when the fetus of at least the twenty-eighth week of gestation is known to be living at the moment of the death of the mother. It would also probably require the physician to use his judgment when he could not positively determine that the fetus was living, with the understanding that after twenty-five minutes from the death of the mother no operation should be done.

DISCUSSION

MR. A. F. REICHMANN: From the earliest times in England it was the established law that there was no such thing as property right in the body of a dead person, and, as a necessary corollary, no liability could arise either civilly or criminally from the taking, handling, mistreatment or mutilation of a body. On the death of a person the disposition of his body became a matter for the public, and was in charge of public officials. The next of kin, or surviving husband or wife, had no claim which the law recognized. At the beginning the courts of this country were inclined to follow the doctrines and precedents laid down by the English courts. The common law of England and this country, however, is a matter of evolution. It is continually expanding with the progress of civilization and adapting itself to the changed conditions of society, business and public sentiment. The duty to give bodies burial and to pay the incidental expenses was imposed by law on the surviving husband or wife or the next of kin. It is now the settled law of this country that the possession of a dead body belongs to those most intimately connected with the deceased by domestic ties, for the purpose of decent burial, and that this right belongs primarily to the surviving husband or wife, and then to the next of kin. However, any unlawful mistreatment or mutilation of a corpse will give rise to an action for damages against the guilty person or persons and in favor of those who have a legal right to the possession of the body.

The question still remains, however, whether such an action will lie in case of the justifiable performance of a Cesarean section done without the consent or even against the protest of those who are entitled to the possession of the body. In my judgment, it does not by any means follow that such an action will lie. While the law now recognizes a legal right to the possession of a dead body, and gives a legal remedy for the violation of that legal right, the legal right is, after all, merely a relative and not an absolute one. Various elements and considerations may under proper circumstances materially affect and diminish this right or even totally supersede it. In the interest of public health, states and municipalities in the exercise of their police power have the right to regulate the places of burial, and to disinter human bodies and reinter them in other places without the consent and even against the protest of those in whom the primary legal right to their possession is vested. Legislatures and municipalities may prescribe regulations for burial and it has been held that the attending physician or a foreigner has the right to hold a post-mortem examination on a body if he cannot otherwise issue the certificate of death required by law.

As to the probable attitude of the law toward the preservation of human life through the instrumentality of a Cesarean section, we are told that it was decreed by the Romans that no pregnant woman should be buried until the fetus had been removed by a Cesarean section, and I understand that the Italian laws at one time, if indeed they do not now, required this intervention. The law and public policy look with favor, and in some instances actively and affirmatively encourage the marital relationship, and by its means the creation of human life and the upbuilding of the family. It is not likely, therefore, that the law will frown on any effort to promote its policy. The preservation of human life is of the greatest concern and solicitude of the law and public policy. Self-defense is a legal justification for the killing of another human being, and the law justifies the killing of another, not only to save the slayer's own life, but that of one intimately related to him. Therefore, it is not likely that the law will look with favor on one who, from considerations at best merely sentimental, despite the advice of men learned in medicine and surgery, would prefer to see a human life lost that might be saved, rather than permit the disturbance of an inanimate body. Suppose a woman far advanced in pregnancy within a short period of the delivery of her child, in good health, met with a sudden accident resulting in her death, but not in the death of her child. Her physician knows that the child is there and knows that it is about to be born. Would it be likely that the law would be a party in abetting the husband or next of kin in refusing a post-mortem section? If the surgeon performs the operation without the consent of the husband or the next of kin, or even in spite of their protests, it is very reasonable to believe that he will be protected by the law, providing he is acting within the limitations of demonstrable scientific knowledge with regard to these cases. To interfere under such circumstances would be murder. What moral or legal right have they to refuse consent? If the consent of the husband is unnecessary, and his refusal of no consequence in the eyes of the law, then *a priori* this must be so of the others. The mere fact that he is in part the author of the life in jeopardy gives him no superior right when the question of life and death is involved. The father has no property in his child. He has at most merely the right to its custody, and this to enable him to discharge toward his child certain active and affirmative duties imposed on him by law, for the violation of which penalties are imposed. He can be punished for its mistreatment and hanged the same as anyone else for causing its death. His custody of the child may be terminated by law when its well-being requires it. The child belongs to the state. Will it then be said, in the light of these considerations, that the father has the right by withholding his consent to cause the loss of a life which, after all, belongs not to him, but to the state and society, and in which his proprietary interest is so slight? I can only answer this most emphatically in the negative. Reviewing the entire situation, I cannot escape the conclusion that, given a case in which, in the light of existing scientific knowledge, the belief is reasonably justifiable that the infant may be rescued and its life saved, a Cesarean section will be justified by the law on grounds of public policy, and the person performing it will be fully protected both civilly and criminally though it is performed without the consent or even against the protest of those in whom the law has recognized a legal right to the possession of the body of the deceased, provided, of course, that the operation is performed in good faith and with due skill and without unnecessary injury.

DR. FRANK CARY: Some years ago, a woman was suffering from uremic convulsions and the question was whether or not an immediate delivery should be instituted. I was a consultant and urged an immediate delivery. In the meantime the woman died and I advised a Cesarean section. There was considerable argument as to the propriety of such an operation. Finally, the husband left the matter in my hands, I made the section and delivered a living child, demonstrating that that was the proper thing to do.

DR. ROBERT T. GILLMORE: In November, 1905, Dr. T. J. Watkins published a paper narrating a case of post-mortem Cesarean section done by him in 1904, following the death of the mother from eclampsia. The operation was performed five minutes after the death of the mother. The child was alive, is now well and strong, and, so far as I know, is the only living child in Chicago born by post-mortem Cesarean section.

DR. GEORGE SCHMAUCH: In Germany the physician is obliged to do a post-mortem Cesarean section. The law requires this, when there is a conviction that the child is alive. Several men have reported about four or five hundred cases all told with 20 or 25 per cent. of living children.

DR. CHARLES E. PADDOCK: I would perform that operation on any woman dying during labor or at term if the child is strong and viable.

DR. RUDOLPH W. HOLMES: I have twice done a post-mortem Cesarean section. In one case I knew the baby was dead. I

believe that it is the physician's duty to do this operation even when he knows that the child is dead. I am convinced that the law would sustain him in this.

DR. GUSTAV KOLISCHER: In all European countries the law prescribes that it is absolutely the duty of the attending physician to do a post-mortem Cesarean section. No time limit is set on the operation. The law assumes that the physician is competent to decide whether or not the mother is dead. The law also requires that after the operation is done the uterus and abdomen must be closed, because the woman might be alive. It is the intention of the law to protect the child in utero the same as it would a living child. If the husband prevents the physician from performing the section, he commits the same misdemeanor as if he failed to call in competent medical assistance when his child was ill.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION

Twentieth Annual Meeting, held at Chicago, Dec. 19-20, 1910

(Concluded from page 219)

Acute Suppurative Appendicitis

DR. WILLARD BARTLETT, St. Louis: I operate for this condition as follows: The abdomen is opened through a gridiron incision immediately over the dull area if one can be made out, otherwise at McBurney's point. It is very rarely the case that this incision has to be enlarged, which can be done though with slightly greater difficulty than is the case in ordinary through and through openings. Immediate search for the appendix is made. I always remove it if it can be found without unnecessary loss of time or disturbance of many adhesions. I do not often go so far as to turn out the head of the cecum in order to find the appendix, but consider this advisable where this carries with it the adherent viscera which completely surround a collection of pus, to be opened outside of the abdomen at the removal of the appendix. It is rarely my custom to do much or any so-called walling off with gauze in the search for the appendix. Harm is done by gauze packs, and ready access to the viscera is interfered with. While in clean work I make a peritoneal autoplasty when working on the appendix or any other viscus covered by peritoneum, in these pus cases I simply tie a strand of catgut around the base of it, including the mesenteriolum, and cut it off. Drainage is instituted in every case in which exudate is found, tying at its middle a strip of rubber dam or a ribbon cut from an old rubber glove in the catgut ligature on the base of the appendix. Drainage is further aided by placing the patient in bed on the face directly after the operation. In a few days the catgut ligature is absorbed and the drainage comes out of its own accord. Suture of the deeper layers of the abdominal wall is never attempted unless the muscle-splitting incision has been considerably enlarged. The drain practically fills the small dead space resulting from the spontaneous closure of such incisions, thus reestablishing intra-abdominal pressure sufficiently for our purpose. In the middle of the skin wound are placed one or two clips, at each side of which one-half of the rubber drain emerges, its two ends being fastened together by a clip which prevents the possibility of its being drawn into the abdomen. Thus one has practically coated the edges of an infected wound without any danger of pus retention in the depths or under the skin. After the two drains have been removed at the end of a week, the resulting defects in the skin are closed with adhesive plaster, and in two weeks after the operation most of these patients are out of bed with a solid abdominal wall and with the skin wound completely healed or almost so.

Intussusception in Adults

DR. ELLSWORTH ELIOT, New York City: Intussusception in adults is of more importance than previous study would indicate. The rarer causes are foreign bodies and parasites, the less rare, ulceration from diarrheal diseases, tuberculosis, fecal masses, etc. A more common cause is trauma, especially severe muscular effort. The most frequent cause is a tumor, especially the benign polyp, with constricted base. The clinical course varies from one most acute to the very chronic. Of the individual symptoms there is a great variety. Constipation is the rule, but normal stool or diarrhea may occur. Blood or mucus in the stools is less frequent and usually signifies a tumor. A tumor varying in size and shape, especially during the attacks of pain and changing its position along the course of the colon, is characteristic. The tumor appears first in the right lower quadrant, but should be looked for in the pelvis or in a position covered by the liver or spleen. Distention, general or focal, is variable. The course of the attack is usually very severe, especially in those cases with Meckel's diverticulum. In the protracted cases the natural processes may cause sloughing of the intussusceptum which is passed by rectum. Hope for such relief should not encourage conservative measures of treatment, for in usually less than eighteen months secondary obstruction occurs. I suggest, therefore, that after the acute symptoms have disappeared lateral anastomosis be done, connecting the bowel above with that below the affected portion. Treatment should in most cases be radical. With conservative measures complete reduction is never certain; recurrence is likely, and the initial manipulation lowers the resistance in subsequent operation. Reduction in the first twenty-four hours is accomplished by combined expression and contraction in from ten to fifteen minutes, reduction by either alone being dangerous. Recurrence is avoided by anchorage of the cecum to the abdominal wall, by plication of the mesentery or by long longitudinal endoplication of the cecum along the anterior longitudinal muscular band. Gangrenous intussusceptum and intussuscipiens demand resection followed by anastomosis or temporary enterostomy. A viable sheath may be split along longitudinally and through this the intussusceptum resected. Temporizing measures are enteroanastomosis and artificial anus. The procedure of choice is to reduce gently as far as possible and then resect. Complete reduction followed by resection is employed only where a tumor or the like is concerned.

Intestinal Obstruction Due to Kinks and Adhesions of the Terminal Ileum

DR. CHARLES H. MAYO, Rochester, Minn.: The stomach suffers from many reflex conditions; only one patient in ten with gastric symptoms shows actual lesions. Many bowel conditions, as obstructions, appendiceal concretions, stimulate symptoms of ulcer. The development of the mid-intestine extends from below the common duct to and including the part of the transverse colon. Ten inches of the ileum is pelvic, was originally fixed to the cecum, and becomes detached at first, except for a lateral opening. When this fails to take place obstruction is more liable to occur. In extensive appendiceal operations in cases with obscure symptoms, Mr. Lane has noted an intestinal kink near the ileocecal valve. He believes this to cause obstruction, often non-inflammatory, and probably resulting from traction of the loaded cecum to the pelvis. The symptoms often simulate those of appendicitis, ulcer and various forms of constipation. We have seen many cases of this nature, both of inflammatory and non-inflammatory origin, and producing reflex symptoms. Therefore, with the present increased facilities for intestinal exploration, the 4 terminal inches of the ileum should be examined, when possible, in obscure cases of digestive disturbance.

Choice of Operation for Inguinal Hernia

DR. ARCHIBALD MACLAREN and DR. HARRY P. RITCHIE, St. Paul: In 123 operations on 97 individuals no extraordinary measures, such as filigrees, flaps of the recti, were found necessary to obtain satisfactory repair. During the first decade, the operation without the most positive indications is often questioned. It is no odd experience to have the truss obliterate the sac and when recurrence does come it will usually result in a less complicated form of hernia. During the second decade and beyond our advice is positive as the presence of the hernia is then permanent. All cases suffering from an inflammation of any degree are instructed particularly as to the possibility of recurrence.

Of the ninety-eight operations on men, there is one Halstead with cure, fifty-five Bassinis with one return, and forty-two Fergusons with three returns. Previous to 1905, there were two cases in which from their description the cord was not

displaced, but in all others (thirty-four in number) a Bassini was done. One relapse had occurred and had been reoperated, but the remembrance of the technic of the first operation was such that the failure was ascribed to this rather than to the principle. Beginning in February, 1905, we were influenced to use of the Ferguson operation. This was done as a routine operation forty-two times. The three returns have all been repaired, and the conditions found were identical in each case. There was no sign of the old hernia, but a new one had formed at the most dependent part of the canal. The sac came directly through to the inner side of the cord. When the sac was removed, it was easily demonstrated that if the tissues were replaced as before, this defect would be uncorrected and there seemed to be no reason why the sac would not immediately recur. The only possible procedure was the use of the conjoined tendon and the displacement of the cord, thus performing a Bassini. The percentage of our success as to the displacement or non-displacement is in favor of the former. In view of the formation of an entirely new kind of hernia which comes without displacement of the cord, and which we are powerless to prevent, it has swung the pendulum back in favor of the Bassini, and our present feeling is that if there is a recurrence, we will call it an operative fault and do it over again.

Typhoid Cholecystitis

DR. JOHN E. SUMMERS, Omaha, Neb.: Much discussion has taken place as to the mode of invasion of the gall-bladder by the typhoid bacilli. According to Chiari, the route of infection is not by ascension from the intestinal tract. His theory of gall-bladder infection by the typhoid bacillus is, first, the intestine, thence the blood, and then the gall-bladder. I had one pure case of typhoid cholecystitis, the gall-bladder involvement giving symptoms at the beginning of the first relapse. The absence of any history of gall-stones prior to the illness can fairly fix the initiation of the formation of the stone found in the common duct as taking place probably during the first part of the attack. The time from the beginning of the attack to the time of removal of the stone was from April 1 to August 22—sufficient time for its formation. So far as I know this is the first case of typhoidal cholecystitis with probable formation of the stone during the attack in which the stone was removed from the common duct. Cultures from the center of the stone were sterile—a finding which does not negative the origin of the stone as due to typhoid cholecystitis. Cholecystostomy on typhoid carriers should be done whenever there is evidence of any infection in the gall-bladder or ducts. In cases in which no signs of inflammation can be found, it might be considered that possibly the nesting-place for the bacilli was in a diverticulum and operation is not indicated. There is favorable evidence for the carrying out of cholecystostomy in these dangerous persons.

Plication of the Anterior Broad Ligament for Retrodisplacements

DR. A. W. ABBOTT, Minneapolis: The round ligament is not a natural support of the uterus, while the broad ligament is. Suture of the broad ligament just below the round ligament makes an efficient support and conforms to the natural anatomical requirements. The operation is rapidly done. The failures are less than by other methods, and there is less pain after the operation.

Abdominal Exclusion of the Fundus in Procidentia Uteri

DR. JOSEPH RILUS EASTMAN, Indianapolis: The question of whether the uterus in its normal state is suspended by its ligaments and thus secured in position or is supported or upheld by the muscles and fasciae of the pelvic floor, the ligaments serving only as guides, becomes in the presence of complete procidentia a question of lessened importance, for in these extreme cases hysterectomy or the abdominal operation with fixation is absolutely necessary, in addition to a thorough repair of the vaginal supports, with amputation of the elongated portio vaginalis and curettage. The fixation I make is one in which the uterine fundus is drawn quite through the abdominal wound, the entire fundus being excluded and secured with a large transfixing pin. The pin is allowed to remain in place for two and one-half weeks. In excluding the fundus in cases of complete procidentia, the aim has been to fix the uterus higher than can be done by an ordinary fixation, to provide for firm attachment of the peritoneum, muscles and aponeurosis at a low level on the anterior, posterior and lateral aspects of the uterine body. All of the layers of the abdominal coverings are drawn snugly around the uterine body and sutured to that organ anteriorly, posteriorly and laterally. Two patients thus operated on, though they were past 50 years of age, had not passed the menopause, and in one of these the uterine appendages were removed and in the other the tubes were divided and the peritoneal screen suggested by Ries interposed. In three cases I have seen the abdominal operation was preceded by curettage, amputation of the cervix, anterior and posterior colporrhaphy and perineorrhaphy. In each case the fundus was covered over with skin, growing centrally from the periphery within two or three weeks. Owing to the firmness of the attachment and the elevation given by the transfixing pin, the possibility of sagging or detachment is minimized. The method offers the greatest possible uterine surface for fixation in the abdominal coverings. It makes possible reduction of deformities caused by extreme relaxation as a simple intraabdominal fixation could not do because the uterus is drawn higher and the firmer fixation prevents a yielding ligamentous fixation or a complete sundering of the attached structures, an accident which is perhaps less rare than is imagined.

Lesions of the Hip-Joint and Their Treatment

DR. JOHN B. MURPHY, Chicago: In my recent work in connection with fractures in attaching the upper end of the femur frequently I found a definite condition occurring, namely, absorption of the neck. No such absorption takes place in fractures in any other part of the body. It never occurs when there is a fracture in the upper end of the humerus. This absorption is due to the primary condition of the circulation in the neck of the femur. When there is a fracture, a lesion or disease, the repair of that lesion depends more on the condition of the circulation in the neighborhood than on any other one thing, taking into account always the regenerative potency of the individual structure. In fractures that occur close to the head of the femur, there is practically no absorption at all; no fatty degeneration, no breaking down, no liquefaction of bone. When a fracture occurs close to the base of the neck and there is attachment to the trochanter, it does not tear off the blood-vessels in the capsule inside. That capsule goes down and out and back in again, and the blood-vessels go in a proximal and distal direction, but the bone for a certain distance, in a great majority of cases, is absorbed. If there is a fracture of the neck of the femur which does not tear off the blood-vessels, then the portion between the trochanter and the head remains, and it is capable not only of revascularization, but of ossification, regeneration and of sustaining the neck. In the management of fractures of the femur, it has been the custom to dress them with a straight external splint. What does this do? It tends to shortening by shortening of the adductors, and shortening of the gluteal group of muscles attached to the trochanter, and not only that, the tendency of the adductors is to draw the limb inward, and there is shortening in that position. What the surgeon wishes to do is to reduce to a minimum contraction during the process of absorption of this portion of the head of the femur, so that when absorption has taken place and the tissues are ready for regeneration, it is essential to have the parts in apposition. They can be best maintained in apposition by relaxing the group of muscles which did so much to cause shortening. The ambulatory management of tuberculosis of the head of the femur is wrong. An ambulatory apparatus is applied to prevent motion, and as far as it inhibits motion in a joint it is valuable. But what should it be applied for? To prevent pressure on the inflamed part. When the products of infection are held under tension there is rapid destruction of tissue. This tension should be relieved. The first main principle should be to separate these articular surfaces by an extension apparatus, and then build up the patient to stimulate the process of repair.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

January 12

1 Acute Poliomyeloencephalitis. J. L. Morse, Boston.
2 *Treatment of Acute Poliomyelitis. W. E. Paul, Boston.
3 A Review of Sanitation in Panama. F. P. McCarthy, Boston.
4 Diseases of the Upper Abdomen That May Require Surgical Intervention. J. W. Keefe, Providence, R. I.
5 Mongolian Idiocy. W. N. Bullard, Boston.

2. Treatment of Acute Poliomyelitis.—The treatment employed by Paul may be summed up as follows: First are the patients with weakened muscles, and in these the order of value in treatment is: (1) voluntary exercises, (2) electricity, (3) massage. Second are the patients with paralysis, moderate atrophy and reaction of degeneration; in this class the order of value in treatment is: (1) electricity, (2) massage, (3) passive exercise. Third are those with absolute paralysis, complete reaction of degeneration, extreme atrophy and cold extremity; in this class the order of value in treatment is as follows: (1) massage, (2) passive exercises, (3) electricity.

Medical Record, New York

January 14

6 Recent Experiences with Salvarsan. S. W. Lambert, New York.
7 *Practical Points in Treatment of Diseases of the Heart. E. E. Cornwall, Brooklyn, N. Y.
8 Treatment of Chronic Appendicitis with High-Frequency Currents. W. H. King, New York.
9 *Future of Psychotherapy. T. Klingmann, Ann Arbor, Mich.
10 Duodenitis. M. Gross, New York.
11 *Gastric Roentgenology. E. H. Skinner, Kansas City, Mo.

7. Treatment of Diseases of the Heart.—The conclusions arrived at by Cornwall are as follows: Make the diagnosis before prescribing treatment. Do not give heart stimulants to restore compensation when rest in bed alone will do it, except in cases occurring in middle or later life in which prolonged rest in bed might prove injurious. Do not give heart stimulants after compensation has been restored. Remember that children and young people should be kept in bed for at least one month after compensation in chronic valvular disease has been completely restored, and that they should be kept in bed for some time after an attack of acute endocarditis, with or without loss of compensation. Learn how to use the best remedies and forget the rest. Do not give digitalis to children or to old people, and always bear in mind the limitations and contra-indications to the use of this drug. Do not exceed 3 minims of tincture of strophanthus at a dose, except in extraordinary cases and when tolerance has been established. If you prescribe mechanical methods of treatment see that the dose is right; they can do harm in overdose as well as drugs. Do not expect to get compensation in a badly decompensated case of valvular disease too soon; be satisfied for a while if, under treatment, the patient does not get worse; improvement in many of these cases must be slow if it comes at all and attempts to hurry it unduly only exhaust the heart. Use the smallest dose of any remedy that will do the work. Rarely tell a patient with serious heart disease how grave is his condition, for such patients easily lose hope and become despondent, which aggravates their condition. The family, however, should always be told, and the patient should be informed of his true condition if that is the only way to secure his cooperation in treatment. Be slow to give up hope, at least of improving the patient's symptoms in apparently desperate conditions, and especially beware of giving too definite a prognosis. Cardiac therapeutics is in the majority of cases a fight against odds, but by the exercise of patience, perseverance, and especially judgment, many may be accomplished.

9. Abstracted in THE JOURNAL, Nov. 5, 1910, p. 1674.

11. Abstracted in THE JOURNAL, Oct. 29, 1910, p. 1582.

New York Medical Journal

January 14

12 Treatment of Fractures, Especially Those of the Leg. C. Beck, New York.
13 How Pure Milk Cultures of Lactic Acid Ferments May be Obtained. F. S. Mason, New York.
14 Stereoscopic Photography with a Single Camera. W. G. Elmer, Philadelphia.
15 *"Grams"—Radiographs—in Three Dimensions. M. Girsdansky, New York.
16 Identification of the Tubercle Bacilli by Antiformin. D. Felberbaum, New York.
17 Diet, Nutrition and Growth in Children. E. M. Sill, New York.
18 The Heart in Lobar Pneumonia and Its Treatment. E. E. Cornwall, Brooklyn, N. Y.
19 *Fatal Case of Toxic Hematoporphyrinuria Complicating Septic Perforation of the Uterus. S. Wiener, New York.

15. "Grams" in Three Dimensions.—Briefly stated, Girsdansky's procedure is as follows: The Roentgen-ray apparatus and the photographic plate are adjusted in the usual manner. Assuming that the object is of such a size as to enable one to photograph it twice on the same plate, put the object over one-half of the plate, while the free half of the plate is protected with a sheet of lead, and a picture is taken. The operation is now reversed; the lead is put over the already exposed part; the object is moved over the still unexposed part, with the utmost care so that it maintains a position as symmetrical as possible to the source of light and to its own former position, and the picture is taken again. When the plate is developed, it shows a picture which resembles one taken with an ordinary stereoscopic camera. A print from such a plate differs from the commercial stereogram in that it is, in relation to the commercial picture, a transposed one, i. e., opposite to the right eye occurs the picture as would be seen by the left retina, and opposite the left eye occurs the picture as would be seen by the right retina. A Roentgenogram from such a plate is placed at a convenient distance from the eyes; a card board of a convenient size is prepared, and in the center of it a window is cut out which is about equal in size to any one individual picture of the twin Roentgenogram. The fenestrated screen is held in front of the print and at such a distance and in such a position that the right hand picture is in its entirety visible to the left eye, and the left hand picture to the right eye. When both eyes are focussed on the brim and frame of the card board window, the Roentgenogram appears at the plane of the window, as an image in three dimensions. If any difficulty at all is experienced at the beginning in the focussing of the eyes at the place of the empty window, one or more microscopic slides are fastened to the windowed card board by means of adhesive plaster, so as to cover it completely or in part and the observer proceeds as before. The image in three dimensions seems to appear on or between the glass slides.

19. Toxic Hematoporphyrinuria.—In this case the patient took repeated doses of saffron to induce abortion. Several similar cases are recorded in the literature. The symptoms of saffron poisoning, besides the hematoporphyrinuria are colic, vomiting, purging and convulsions, followed by delirium and coma.

Lancet-Clinic, Cincinnati

January 7

20 Smith's Cataract Operation. (Continued.) D. T. Vail, Cincinnati.
21 Physiologic Measures in Treatment of Nervous Diseases. T. A. Williams, Washington, D. C.
22 Seasickness. H. R. Carroll, Cincinnati.

January 14

23 Smith's Cataract Operation (Concluded). D. T. Vail, Cincinnati.
24 *Pain in Abdominal Disease. W. M. Harsha, Chicago.

24. Abstracted in THE JOURNAL, Sept. 24, 1910, p. 1132.

Surgery, Gynecology and Obstetrics, Chicago

December

25 *Surgical Treatment of Ulcers Along the Lesser Curvature of the Stomach. R. C. Coffey, Portland, Ore.
26 Use of the Finger in Rhinoplasty. T. A. McGraw, Detroit.
27 Ligation and Partial Thyroidectomy for Hyperthyroidism. C. H. Mayo, Rochester, Minn.
28 Brain Tumor with Impaction in Foramen Magnum Following Lumbar Puncture. W. W. Hamburger, Chicago.
29 Cerebral Hernia Following a Decompression Operation for Tumor of the Brain. C. A. Parker, Chicago.

30 Indications and Technic of Vaginal Cesarean Section. H. M. Stowe, Chicago.
31 The Newer Conservative Treatments for Pelvic Infection. R. T. Gillmore, Chicago.
32 *Diagnosis of Postoperative Insanity. J. C. DaCosta, Philadelphia.
33 Sarcoma of the Uterus. H. C. Dalton, St. Louis.
34 Use of Corpora Lutea in Gynecology. C. A. Hill, Pittsburg.
35 Traumatic Rupture of Pus Tubes, Causing Diffuse Peritonitis. C. M. Echols, Milwaukee, Wis.
36 Cesarean Section for Mechanical Obstruction; Ovarian Fibroma. G. Link, Indianapolis.
37 *A Popliteal Aneurysm of Unusual Size. J. R. B. Branch, Macon.
38 Technic of Nerve Alcoholization in Treatment of Spasticity and Muscle Group Overaction. N. Allison, St. Louis.
39 *Prostatectomy by the Perineal Route Without Opening the Bladder, with Immediate Suture. A. E. Hertzler, Kansas City, Mo.
40 *Extirpation of Upper Rectum and Sigmoid; the Noble Anastomat Modified. J. F. Baldwin, Columbus, Ohio.
41 Technic of Operations for Dilating the Os Uteri at or Near Term. C. B. Reed, Chicago.
42 *New Technic for Keeping Count of Gauze Pads. C. W. Barrett, Chicago.
43 *New Forceps for End-to-End Intestinal Anastomosis. L. J. Pollock and W. C. Speidel, Chicago.
44 *New Apparatus for Fracture Fixation. F. J. Cotton, Boston
45 An Intravesical Ureterorenal Tumor. W. H. Luckett, New York.

25. **Surgical Treatment of Ulcers of the Stomach.**—The fact that very little has been said as to the surgical treatment of ulcers along the lesser curvature, and less as to the proper technic for excising an ulcer, prompts Coffey to report briefly five cases in which the patients were operated on during the year and in which a complete symptomatic recovery took place. These cases illustrate the various forms and locations of ulcers along the lesser curvature, and the variety of technic used. In Case 1, excision of the lesser curvature was done. This patient made a complete recovery, and five months after operation is well. Case 2 was one of long-standing ulcer which had finally healed and contracted the middle of the stomach down to a small tube with a caliber not larger than a lead pencil. Coffey excised the constricted portion of the stomach and duodenum, and did an end-to-end anastomosis between the two pouches. The clinical results were perfect, and the patient was well five months after the operation. In Case 3 the cicatrix of an old ulcer had almost completely closed the pylorus, and another large ulcer, located about the middle of the lesser curvature, was still active and bleeding but had contracted and formed sufficient scar tissue to make an hour-glass stomach. Only a narrow tube of healthy stomach remained on the greater curvature, therefore the only operation which offered hope of cure without incurring too much risk, was a gastrogastrostomy connecting the two pouches, and a gastrojejunostomy connecting the pyloric pouch with jejunum. The patient began to take nourishment on the third day and within two weeks was eating full meals and was well and fat when last heard from, seven months after the operation. Case 4 was one of ulcer well up toward the esophagus on the lesser curvature, which had gradually contracted producing almost complete stenosis near the esophagus, a small stomach tube passing with difficulty. The ulcer was excised and the wound closed transversely. The patient was symptomatically well five months after operation. In Case 5, a hard indurated ulcer was located in the posterior wall near the lesser curvature. The thick ragged edges of the ulcer were excised and the wound closed. The patient made an uninterrupted operative recovery.

32. Abstracted in THE JOURNAL, Dec. 10, 1910, p. 2093.

37. **Popliteal Aneurysm of Unusual Size.**—In Branch's case the left leg was the seat of a tumor, extending from within a few inches of the great trochanter to midway between the knee-joint and ankle. There was no motion at the knee-joint. The tumor was tender, especially behind the knee. The presence of fluid was demonstrated by a sensation of fluctuation at this point, and also over the small area about 2 inches internal to the patella and behind. A slight pulsation was seen and a slight murmur heard. The circumference of the right knee was 13 inches and of the left knee, 27.5 inches; right calf, 14 inches; left, 18 inches. A hip-joint amputation was done, but the patient never rallied from the operation, and died the following day.

39. **Prostatectomy by the Perineal Route.**—Elimination of the open wound, avoidance of perineal fistula, and prevention of incontinence are the ends Hertzler seeks to attain by his operation. By means of a modified Young's tractor, small enough (26 F.) to pass through the urethra without injuring it, the prostate is controlled and pushed into the wound so as to be accessible through the perineal incision. The bladder is moderately distended with water injected through the tractor, which is made hollow for the purpose. An inverted-V incision is made, beginning over the bulb and extending laterally on each side to the ischial tuberosities. The soft parts are incised down far enough to expose the median raphé. A Young's forked retractor is placed in position and strong traction is exerted. The raphé and levator are not incised, the urethra is cleared down to the prostate and the lower and posterior surfaces of the gland are exposed. Care must be taken to separate the rectum from the posterior surface as far as the bladder. As the dissection is done, all freely bleeding points are clamped and ligated. The capsule of the prostate is incised and separated from the gland on the lateral side as far back as the bladder. The dissection of the prostate from the urethra is then begun. If a median lobe exists it may be pressed into the wound after the lateral lobes have been removed. The opposite lobe is treated in the same way. When the lobes have been removed complete hemostasis is secured by making a purse-string suture in the depth of the wound, including the remains of the capsule and the rectum. The water is then drained from the bladder through the tractor, and if it is not blood-stained it may be assumed that the mucosa of the bladder and urethra has not been injured. The wound may then be closed, care being taken to obliterate all dead spaces by buried catgut sutures. The structure external to the cavity occupied by the prostate may be closed by sweeping silkworm gut sutures which pass through the skin after the manner of obstetric repairs of the perineum. The bladder is again irrigated and the blades of the tractor are closed while the bladder is distended, in order to avoid catching the wall between the blades of the tractor. The water may be allowed to escape before the tractor is removed. The wound which results, resembles that produced by a perineorrhapy. If the urethra is intact, healing is complete in a week. Should the method fail, the necessary number of silkworm sutures may be removed and the wound treated as an open one just as though no primary union had been attempted. The operation as described, or a modification of it, has been done by Hertzler eight times. Infection requiring a complete opening of the wound occurred in one case, and partial opening was required in two other cases.

40. **Extirpation of Upper Rectum and Sigmoid.**—Baldwin has modified the Noble "anastomat" by making a curved tube, and by adding a spring device, to maintain the parts in apposition, as in the Murphy button. The inner tube is cut into a spiral, so as to furnish a spring of proper tension. To this is attached a hook which catches over the lower end of the outer tube. This hook can easily be caught with a hemostat, or with a special device. The inner tube being made flexible by the cutting of the spring enables one to bring the parts into position with less traumatism of the mesosigmoid than is possible with a rigid tube. Three of Baldwin's patients were women, and in these three he opened the cul-de-sac and passed gauze from above into the vagina so as to offer an additional protection in case of any leakage at the point of union in the bowel. In one of these cases this feature of the technic doubtless saved the patient's life, as a fecal fistula developed into the vagina; it had closed, however, when the patient left the hospital.

42. **Keeping Count of Gauze Pads.**—To laparotomy pads of all sizes, Barrett attaches a small, smooth, inexpensive snap through the medium of an 8 or 10-inch tape. To the laparotomy sheet a large horse-blanket pin, such as is now commonly used to group instruments, is attached a little distance from the wound. When each sponge comes to the field of operation it is snapped to the safety pin and is then introduced, the number of snaps indicating at all times the number of pads in the wound, and the tapes furnishing a ready means

of reaching the pads. The snaps are fixed, are not needed for other purposes, and are not to be confused with other instruments used and so remain at their task. Any sponge may be detached at will.

43. **Forceps for Intestinal Anastomosis.**—The instrument devised by Pollock and Speidel consists of a forceps shaped so as to form at its end an oblong square having at the center of its distal side two rings which may be approximated; these rings are inserted into slots, whereby rings of several sizes may be used in the instrument, the sizes being ½, ⅝ and ¾ inches on their outside diameter. These rings are hinged, and the halves of the rings are held together by means either of a spring or a ball-and-socket lock. After the application of intestinal clamps, the mesenteric arteries are tied, the mesentery incised, and the intestines resected or divided in the usual manner. Each end of the intestines is then drawn through the rings by a fine tissue forceps, and the ends turned back over the rings as a small cuff. The forceps is then closed, thereby bringing the mucosa of the two ends of the intestines into apposition. There is no difficulty in turning back the mesenteric border and with it a small amount of the mesentery; the first suture, including the mesentery and the mesenteric border of the intestines, allows no subsequent bleeding. The severed ends may then be sutured by any of the various methods in vogue. The forceps is then removed by opening the rings and the mesentery is sutured in the usual manner.

44. **New Apparatus for Fracture Fixation.**—In certain old or new fractures (usually approximately transverse fractures) of the femur that cannot be brought into place by ordinary methods, in a certain few fractures of the upper arm, and some few fractures of the lower leg, Cotton uses an apparatus which consists of steel screws of a diameter of 5/16 inch, with a screw thread of 24 turns to the inch cut on the fore end for a distance of 1¾ inches, and at the butt for a distance of 3¼ inches. This leaves a smooth polished shank at the point where the skin must eventually lie in contact with the screw. Each screw is cut at its tip into the shape of a "diamond-point" drill, at the other end it is so squared and tapered that it may be held firmly and squarely in a "drill chuck." The drill handle used is one furnished with such a "chuck," operating on the same principle as the more familiar "automatic" screw-driver. All that is necessary is to set the drill screw in the handle squarely, to set the point against the bone, and then alternately press on and release the "automatic" handle. Two screws are inserted into each fragment. The next step is accurate reduction of the fracture fragments. On each screw is spun a nut. Then over the whole set of screws comes a perforated oak board and then the washers. These nuts and washers are not steel, but iron, soft enough so that they can be "jammed" or "froze" in the setting up, giving a peculiarly rigid fixation. The advantage of this arrangement is said to be that an absolutely rigid fixation may be secured in this way without the least tendency to twist the screws (and with them the bones) out of the proper alignment.

Military Surgeon, Washington, D.C.

January

46 Enzootic Plague in the United States. W. C. Rucker, Washington, D. C.
47 Experiments on Relative Absorption of Solar Heat by Olive-Drab and Khaki-Colored Drilling. W. P. Chamberlain, H. D. Bloombergh and E. D. Kilbourne, U. S. Army.
48 Report on the 1910 Camp of the Division of the Pennsylvania National Guard at Gettysburg, Pa. A. S. Stayer, N. G. Pa.
49 Lessons Learned at Maneuver Camp. C. D. Center, I. N. G.
50 Report of the Chief Sanitary Officer of the Division, Camp of Illinois National Guard, at Peoria, Ill., 1910. D. W. Rogers, I. N. G.
51 The Army and the National Guard from the Viewpoint of a National Guard Officer. H. I. Jones, Ind. N. G.
52 Flat-Foot: A Possible Cause of Back-Ache. E. C. Hill, U. S. Army.
53 Ankylostomiasis. C. L. Cole, U. S. Army.

Quarterly Bulletin Northwestern University Medical School

December

54 *Perforating Duodenal Ulcer with Fat Necrosis. H. M. Richter, Chicago.
55 Significance of the Apex-Beat in Diagnosis of Cardiac Conditions. A. F. Belfeld, Chicago.
56 *Unusual Action of Acetyl-Salicylic Acid. W. H. Buhlig, Chicago
57 *Bacteriology of the Stomatitis of Pellagra. W. H. Buhlig, Chicago.
58 *A Stable Anilin Gentian-Violet. W. H. Buhlig, Chicago.
59 *A New Theory Regarding the Mechanism of Skull Fractures. F. A. Besley, Chicago.
60 Diaphragmatic Hernia. J. H. Hess, Chicago.
61 Six Cases of Intestinal Obstruction. C. M. Fox, Chicago.
62 Quinin and Urea Hydrochlorate as a Local Anesthetic. V. D. Lespinasse, Chicago.
63 Mixed Hypercytosis, Its Nature and Significance. J. F. Hultgen, Chicago.

54. **Perforating Duodenal Ulcer with Fat Necrosis.**—Attention is called by Richter to an infrequent source of fat necrosis, the escape of duodenal contents into the peritoneum. In his case, on opening the abdomen, there immediately presented itself a widespread peritonitis, with considerable effusion, and with areas of fat necrosis widely distributed. The pancreas was immediately exposed, and found to be normal, though the injected overlying peritoneum suggested momentarily acute pancreatitis. Attention was then directed toward the duodenum, and a small perforation was found on its anterior border, about two inches from the pylorus. On retracting the liver and gall bladder, bile could be seen pouring through the opening. A thick inelastic ulcer could be made out in the bowel wall. The perforation was closed with sutures, and a posterior gastrojejunostomy made. A suprapubic peritoneal drain was inserted. The patient recovered.

56. **Unusual Action of Acetyl-Salicylic Acid.**—In Buhlig's case, about four hours after the ingestion of 10 grains of acetyl-salicylic acid, the face, particularly the lips and around the eyes, began to redden somewhat and swell, and shortly was so edematous and stiff that it was an effort to move the lips or eyelids. The bloating was so extreme as to give the impression of a local action of some poison. All over the body there was an urticarial eruption and a hoarseness developed, which a laryngologist asserted was due to edema. The maximum effect was reached in about an hour and a half, after which the edema and the eruption gradually receded.

57. **Bacteriology of the Stomatitis of Pellagra.**—In twelve out of fourteen cases in which direct smears were examined by Buhlig, there was found a combination of spindle-shaped bacilli and long wavy spirochetes. It is Buhlig's opinion that these symbiotic organisms, so common in ulcerative conditions, were one factor in the origin of the stomatitis. Both spirochetes and bacilli were Gram-negative, the latter sometimes only partially so. Cultures on Loeffler's serum were made from a number of these mouths. This particular medium was selected because there often were slight exudates in the mouths near the ulcerations. In these cultures many Gram-negative organisms were found which, from their size and their irregular staining with Loeffler's methylene blue, suggested that they probably were colon bacilli. As a matter of interest only, one of these cultures was plated and some of the colonies carried through the various media. Buhlig secured two Gram-negative organisms, one which corresponded nearly to the *Bacillus lactis aerogenes*, and the other was the *Bacillus cloacæ*, so far as could be judged from cultural and microscopic methods.

58. **A Stable Anilin Gentian-Violet.**—Briefly, this is accomplished by excluding light and air as much as possible from the solution after it is prepared. Buhlig never filters anilin gentian-violet and, therefore, in addition to allowing the minimum action of air and light, he never disturbs or shakes the bottle containing this solution. This is practically carried out by putting the anilin gentian-violet into a syphon bottle of very dark brown glass. The intake for air is cut down to a capillary bore of such size that will still allow a flow of liquid, and the delivery tube is painted black to the tip with asphaltum paint. The lower part of the intake tube for air is also painted, to be quite certain of excluding light. This arrangement affords convenience as well as assuring a dependable stain.

59. **Mechanism of Skull Fractures.**—On investigation, Besley found that the fractures of the base bear a marked similarity in point of direction and location, regardless of where the blow is struck on the vault. These fractures do not follow the lines of least resistance, as to thickness or tensile strength.

The frequent occurrence of fractures in the middle fossa just anterior to the condyles, he believes, is confirmatory evidence of the inbending factor, due to counter force applied at the condyles.

American Journal of Urology, New York

December

64 A Case of Renal Calculi. F. C. Walsh, San Antonio, Texas.
65 Toxic Anuria Due to Bichlorid of Mercury. L. Gross, San Francisco.
66 Traumatic and Postoperative Retention of Urine. C. G. Cumston, Boston.
67 Normal Urine in a Patient with a Right Pyonephrosis. G. W. Warren, New York.

New Orleans Medical and Surgical Journal

January

68 Extrauterine Pregnancy. J. D. Bloom, New Orleans.
69 *A Simple Expedient in Treating Complicated Fractures of the Lower Jaw Forbidding Intrabuccal Prosthetics. L. H. Landry, New Orleans.
70 *Diabetes Mellitus Among Negroes. I. I. Lemann, New Orleans.
71 Gunshot Wounds of the Abdomen. C. Wilson, Birmingham, Ala.
72 Post-Diphtheritic Paralysis. L. L. Gazenavette, New Orleans.
73 Treatment of Syphilis of the Nervous System by Mercurial Inhalations in a Thermo-Diaphoretic Room. S. Schiro, New Orleans.
74 Neuralgia Pain in Distribution of Nerves Pressed on by Inflammatory Exudate and Scar Tissue. E. M. Hummel, New Orleans.
75 Study of the Blood in Certain Acute Infectious Diseases of Childhood and Their Diagnostic Value. J. J. Robert, Baton Rouge.
76 Treatment of Chorea. L. R. DeBuys, New Orleans.
77 Nephritis in Children. E. D. Fenner, New Orleans.

69. **Complicated Fracture of the Lower Jaw.**—The type of case considered by Landry is the case in which the splint is contra-indicated; that is, in multiple fractures of the jaw or marked compound cases with separation of the alveolar process, or cases with marked swelling and hematoma forbidding any intrabuccal appliance owing to pain and inability of keeping the mouth clean, etc. Landry has had occasion to study and observe two such cases. After reducing the fracture as much as possible, five or six turns of a thin Esmarch elastic bandage were taken around the head and chin, bringing the crowns of the teeth of the lower jaw in contact with those of the upper, and at the same time favoring and promoting the reduction and absorption of the hematoma and edema. The patient complained of inability to swallow, but this was due to the swelling and reactionary edema of the parts following the traumatism. Special attention was given to the cleaning of the mouth, particularly with the immobilizing bandage in place, which favored salivary stagnation and putrefaction. An irrigating can armed with a douche nozzle was attached to the head of the bed, and the patient instructed to use it himself, every hour, while awake, allowing the solution to go in as far back as possible and flow outward. In two or three days the swelling had subsided enough to allow him to take soft food. In four or five days, all the acute symptoms having subsided, the patient was allowed to walk about. The bandage was removed and readjusted whenever necessary to wash and freshen the skin. After seventeen days the patient was allowed to leave the hospital, with only a slight deformity and a good functioning jaw.

70. **Diabetes Mellitus Among Negroes.**—Among about 3,000 negroes Lemann found five cases of diabetes, four of which were severe. He says that there is no great difference in the frequency of the disease among whites and among negroes. The etiologic importance attributed by many authors to syphilis and alcoholism loses weight when viewed in the light of the statistics. The widespread existence of syphilis and alcoholism among the race has had no great effect in producing diabetes among them. In Lemann's series of negro diabetics neither of these factors seemed to have played any part in the causation of the disease. Another interesting point worthy of attention is the diet of the negro race. It is often preponderatingly carbohydrate with its hoecake, rice, hominy, and sugar cane. On the sugar plantations during the fall and winter months, sugar cane is an extremely important part and often a major portion of a day's dietary among the laborers. Certainly their carbohydrate function must be capable of caring for huge quantities if it can stand this strain.

Journal of Advanced Therapeutics, New York

December

78 Electricity in Treatment of Gout. F. de Kraft, New York.
79 Roentgen-Ray Treatment of a Case of Lymphoid and Myeloid Leukemia, with Blood Findings of Each. J. W. Torbett, Marlin, Texas.
80 A Pendulum for Interrupting the Static Wave Current. G. E. Pfahler, Philadelphia.

American Journal of Physiology, Boston

January

81 *Physiology of Cell Division. R. S. Lillie, Philadelphia.
82 *Effects of Pressure on Conductivity in Nerve and Muscle. W. J. Meek and W. E. Leaper, Madison, Wis.
83 Effects of Stretching the Nerve on the Rate of Conduction of the Nervous Impulse. A. J. Carlson, Chicago.
84 Production of Glycosuria by Adrenalin in Thyroidectomized Dogs. F. P. Underhill, New Haven, Conn.

81. **Physiology of Cell Division.**—The chief experimental results of Lillie's work proved that the addition of small quantities of calcium chlorid to isotonic solutions of sodium salts (1) prevents the rapid increase in permeability produced in the unfertilized eggs of asterias and arbacia by the pure solution, (2) produces at the same time a marked decrease in the toxicity of the solution, and (3) prevents the membrane formation and initiation of cell division which are typically induced by the pure solution. The view is thus confirmed that both the toxic action of the pure salt solution and its action in initiating cell division are due primarily to the production of a condition of increased surface permeability. This increased permeability is, however, temporary in normal or favorable parthogenetic fertilization. Treatment with hypertonic sea-water after the formation of fertilization membranes by salt solutions results in an increase in the proportion of favorably developing eggs, especially in the case of arbacia, of which the majority of the eggs thus treated may reach active larval stages. Since hypertonic sea-water thus prolongs the life of the egg—an effect comparable to that of calcium in the above antitoxic action—and since prolonged life implies a practically normal permeability, the inference is drawn that the essential effect of such after-treatment is to bring the permeability—which has been increased by the initial membrane-forming treatment—again to the normal. An artificially induced increase is thus followed after a favorable interval by an artificially induced decrease of permeability. Without such after-treatment few eggs succeed in developing beyond an irregular early cleavage stage and development is abnormal.

82. **Effect of Pressure on Conductivity in Nerve and Muscle.**—The average time required to block the time impulse in the sciatic nerve of a frog by means of a constant pressure of 40 pounds was found by the authors to be 7.5 minutes. Under the same conditions 4.4 minutes were required to establish block in fresh sartorius muscles, and 2.4 minutes in curarized muscle. In both nerve and muscle the time necessary to interrupt conduction was proportional to the pressure applied and the strength of the stimulus. Immediately after the application to nerves of pressures not exceeding 20 pounds, stimuli of a given strength frequently caused an increased height of contraction in the recording muscle. There was probably a summation in the muscle of impulses set up in the compressed area with those due to the electrical stimulus.

Pennsylvania Medical Journal, Athens

December

85 *Past, Present and Future of Surgery. J. B. Deaver, Philadelphia.
86 *Significance of Transient Cerebral Crises and Seizures as Occurring in Arteriosclerotics. J. D. Heard, Pittsburg.
87 Symptomatology and Pathology of Tumors of the Pituitary Body. J. H. W. Rhein, Philadelphia.
88 Brain Abscess in Frontal Region; Operation; Death, with Necropsy Findings. T. Diller and J. K. Everhart, Pittsburg.
89 Trachoma and Facts Concerning Its Existence in Pennsylvania. C. M. Harris, Johnstown.
90 Progress of the Trachoma Campaign in Pennsylvania. C. P. Franklin, Philadelphia.
91 *Infant Mortality. S. G. Dixon, Harrisburg.
92 Urgent Need of More Adequate Care and Treatment for the Indigent Insane of Pennsylvania. T. Diller, Pittsburg.
93 Fear, as It Is Manifested in Psychoses, and Its Bearing on Treatment. W. K. Walker, Pittsburg.
94 *Acute Dilatation of the Stomach. E. Laplace, Philadelphia.
95 *Chronic Gastromesenteric Ileus. G. P. Müller, Philadelphia

85, 94 and 95. Abstracted in THE JOURNAL, November 19, p. 1837.

86 and 91. Abstracted in THE JOURNAL, Oct. 29, 1910, pp. 1580 and 1581.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis

January 1

96 *The Heart in Disease of the Thyroid. J. S. Gilfillan, St. Paul.
97 Sinus Inflammation and Its Effect on the Eyes. T. McDavitt, St. Paul.
98 Epidemic Poliomyelitis: Prevention, Diagnosis and Treatment. W. A. Jones, Minneapolis.
99 A Case of Abdominal Pregnancy. F. A. Dunsmoor, Minneapolis.

96. Abstracted in THE JOURNAL, Nov. 19, 1910, p. 1832.

Kentucky Medical Journal, Bowling Green

December 15

100 Heart Block. F. C. Askenstedt, Louisville.
101 Movable Kidney. I. Abell, Louisville.
102 The Wassermann Reaction. E. S. Allen, Louisville.

American Journal of Diseases of Children, Chicago

January

103 *Anatomic Features of the Child's Thorax and Their Practical Application in Physical Diagnosis. G. Fetterolf and J. C. Gittings, Philadelphia.
104 *Three Hundred Cases of Acute Meningitis in Infants and Young Children. L. E. Holt, New York.
105 *Constant Presence of Tubercle Bacilli in the Cerebrospinal Fluid of Tuberculous Meningitis. J. Hemenway, New York.
106 *Influenza Meningitis and Its Experimental Production. M. Wollstein, New York.
107 Amaurotic Family Idiocy. I. A. Abt, Chicago.
108 *Atypical Scarlet Fever. C. G. Kerley, New York.

103. **Anatomic Features of the Child's Thorax.**—This work consisted of making dissections and sections of the bodies of infants which had been injected with a 10 per cent. dilution of liquor formaldehydi and then frozen. The results of the author's study of these preparations are embodied in this paper.

104. **Acute Meningitis in Infants and Children.**—The observations included in Holt's paper relate to 300 cases of acute meningitis seen in children for the most part under 3 years of age. Of this number 197 were observed during the lumbar puncture period and are available for more careful analysis. He says that apart from epidemics of cerebrospinal meningitis, 70 per cent. of the cases of acute meningitis occurring in young children are tuberculous. Etiologically, the 197 cases were divided as follows: Tuberculous, 138 cases; pneumococcic, twenty-two cases; meningococcic (sporadic), twenty-four cases; staphylococcus or streptococcus, ten cases; influenzal, four cases; due to colon bacillus, one case. Two of these cases were mixed infections. Holt urges that lumbar puncture should be employed in every suspected case. It is only with very rare exceptions that,to a skilled observer it gives uncertain results. In tuberculous meningitis, bacilli are always present in the cerebrospinal fluid; although difficult to find in the early stages, in later stages a careful examination should discover them. The v. Pirquet test in most cases gives positive results. In infants and very young children tuberculous meningitis occurs usually as an early manifestation of a general tuberculosis, and generally causes death before the lesions elsewhere are far enough advanced to give definite signs or symptoms. Pulmonary lesions are present in nearly all cases. Tuberculous meningitis is of human origin. Altogether the most frequent cause is exposure to adults with pulmonary tuberculosis. The age incidence and the seasonal occurrence are points which are not yet fully explained. Pneumococcus meningitis usually occurs in younger patients, and is associated with pneumonia. Clinically it resembles meningococcus meningitis but usually the course is shorter and it is almost invariably fatal. Influenza meningitis is infrequent and also resembles the cerebrospinal form; it, too, is almost invariably fatal. Streptococcus and staphylococcus meningitis are very rare forms in infancy, usually occur in the new-born and are often associated with spina bifida (but seldom follow mastoid disease); under such circumstances they are always fatal. Meningococcus meningitis is really the only variety in which at present there may be said to be any hope of recovery. The results in this variety of meningitis have been greatly improved by serotherapy.

105. **Tubercle Bacilli in the Cerebrospinal Fluid.**—In all but 2 of the 137 cases of tuberculous meningitis, tubercle bacilli were demonstrated in the cerebrospinal fluid. The fluid is collected in several test tubes, allowing about 20 c.c. to a tube. The last fluid withdrawn after the child has been raised to the sitting posture is considered the most important, as the bacilli are usually found more readily in this. Care must be taken not to shake the tubes. It has been found that a fibrin coagulum, the so-called film, forms oftener in tubes which have not been agitated. The fibrin coagulum is at first very delicate and friable. It forms with greater regularity and becomes firmer in fluids which have been placed in the incubator over night. After ten hours it is usually so firm that the entire film can be removed with a platinum loop. It is then carefully spread with fine needles on a glass slide. This is stained by the carbol-fuchsin Gabbett method. Bacilli were found with comparative ease in every case in which the film formed. In several cases in which the question of immediate diagnosis was extremely important, there was a sufficient coagulum after the fluid had stood three hours to enable one to find the bacilli.

106. **Influenza Meningitis.**—There have come under Wollstein's observation, within the past year, eight cases of influenza meningitis, from which the influenza bacillus was isolated in every case from the fluid removed by lumbar puncture, and the cultures studied in respect to their biologic reactions. All the cases terminated fatally.

108. **Atypical Scarlet Fever.**—Kerley cites a number of instances to prove that many cases of scarlet fever are so atypical as to go unrecognized until a sequela makes its appearance. He says that it is a disease of direct infection; it is rarely carried by a second person or object. The most contagious period is early in the disease during the period of angina, rash and temperature, therefore, the danger of transmitting the disease during the desquamation period is much exaggerated. Wrongly diagnosed and unsuspected cases are the great transmitters of the disease. During a scarlet fever epidemic, every suspect must be quarantined until he gives reasonable proof of innocence. The most constant symptom is the angina, a deep general congestion of the fauces, but even this may fail. In its symptomatology, scarlet fever is the most inconstant of the exanthemata. In its severity there are the widest possibilities.

Bulletin of the Manila Medical Society

November

109 Mortality Among Filipino Infants as Compared with Mortality Among European and American Infants. J. Albert, Manila.
110 Relation Between Physical Condition of Cattle and Their Resistance to Cattle Plague. E. H. Ruediger, Manila.
111 Medical Notes from French Indo-China. E. R. Whitmore, U. S. Army.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

January

112 Abnormal Implantation of Placenta. W. H. W. Knipe, New York.
113 *Should Eclamptic Mothers Nurse Their New-Born Infants? J. R. Goodall, Montreal.
114 Factors Concerned in Spontaneous Rupture of the Uterus. W. R. Wilson, Philadelphia.
115 *Value of Local Treatment in Gynecologic Cases. J. V. Young, New York.
116 *Pelvic Reflexes. R. T. Morris, New York.
117 *Two Cases of Perforated Gastric Ulcer. T. B. Noble, Indianapolis.
118 *Importance of Public and Private Hospitals in the Education of Young Physicians and Nurses, and the Clinical Instruction of Practitioners. J. Price, Philadelphia.
119 *High Operations in Cesarean Section. W. H. Humiston, Cleveland.
120 "Apical Pregnancy," a Pregnancy in the Horn of a Normal Uterus. H. Grad, New York.
121 *Fibromyomata of the Uterus, Complicating Pregnancy, Labor and the Puerperium. R. W. Lobenstine, New York.
122 *Treatment of Obstruction of Bowels Due to Malignant Neoplasm. M. J. Rosenthal, Fort Wayne, Ind.
123 Torsion of the Great Omentum. W. J. Gillette, Toledo, Ohio.
124 *Secondary Repair of Complete Perineal Laceration; Its Technic and Results. E. J. Ill, Newark, N. J.
125 *Cesarean Section, the Pregnant Uterus Being Within an Umbilical Hernia. J. H. Carstens, Detroit.

113. **Should Eclamptic Mothers Nurse Their New-Born Infants?**—This paper was also published in the *Montreal Medical Journal*, November, 1910.

115. **Local Treatment in Gynecologic Cases.**—The cases in which Young regards local treatment as of value may be outlined as follows: inflammation of the external genitalia, infections and inflammations of the urethra and bladder, many conditions of the rectum and anus not mentioned in this paper, inflammatory and infectious conditions of the vagina, cervix, and endometrium, erosions, ulcerations or cystic degeneration of the cervix, cervical stenosis, uterine and pelvic congestion, local peritonitis, tubal infection, retroversion and the inoperable uterine prolapse of elderly patients. Preparatory to operation, local treatment has seemed to Young to be of great value both in private and hospital practice. In the relief of postoperative pain, and absorption of exudate left after operative procedures where infection had existed, the results have been most satisfactory.

116, 117, 118, 119, 121, 124 and 125. Abstracted in THE JOURNAL, Oct. 15, 1910, pp. 1402, 1403 and 1404.

122. Abstracted in THE JOURNAL, Oct. 8, 1910, p. 1311.

Western Medical Review, Omaha, Neb.

January

126 Insanities of the Puerperal Period. J. M. Aiken, Omaha.
127 Anterior Poliomyelitis. M. A. Ames, North Platte, Neb.
128 Preparation for and Operation of Appendicitis and Appendiceal Abscess. W. L. Sucha, Orleans, Neb.
129 Postoperative Acute Gastric Dilatation. H. M. Hepperlin, Beatrice, Neb.
130 The Emergencies of Hemorrhage and Eclampsia. A. E. Mack, Omaha, Neb.

Ophthalmology, Seattle, Washington

January

131 *An "Unlearnable" Vision Test Card for Use in the Naval Service. E. J. Grow, U. S. Navy.
132 Cyclophoria. A. A. Bradburne, Southport, England.
133 Etiology, Pathology and Treatment of Concomitant, Convergent Squint. L. Emerson, Orange, N. J.
134 *Trachoma Treated After the Coover Method. H. H. Martin, Savannah, Ga.
135 An Unusual Factor in Amblyopia. F. M. Ruby, Union City, Ind.
136 Treatment of Dacryocystitis. G. Goldseth, Jamestown, N. Dak.
137 Traumatic Subconjunctival Dislocation of Cataractous Lens in Its Capsule. F. P. Maynard, Calcutta.
138 Presence of Non-Inflammatory Exudates in the Aqueous Humor. B. Chance, Philadelphia.
139 Marginal Ring Ulcer of the Cornea. S. H. Brown, Philadelphia.
140 A Case of Ulcerous Scleritis. H. Rönne, Copenhagen, Denmark.
141 Electrolysis in Treatment of Indolent Ulcers and Fistulas of the Cornea. F. Cornwall, San Francisco.
142 Anterior Chamber Irrigation After Cataract Extraction. E. T. Smith, Queensland, Australia.
143 Rupture of the Chorioid. G. F. Keiper, Lafayette, Ind.
144 Spasm of the Retinal Arteries. H. D. Bruns, New Orleans.
145 Spontaneous Thrombosis of the Central Vein of the Retina Following Parturition. A. Brav, Philadelphia.
146 Vaccine Therapy and Serotherapy in Ocular Tuberculosis. G. S. Derby, Boston.

131. Also published in the *United States Naval Bulletin*, August, 1910; abstracted in THE JOURNAL, Aug. 6, 1910, p. 534.

134. **Trachoma Treated by Coover Method.**—The first fifteen of the sixty patients seen by Martin were treated after Coover's method unmodified, the remaining forty-five were treated after the Coover method modified as follows: Instead of burning alcohol or making any other attempt to sterilize the sandpaper, he used the sandpaper just as it came from the shop, but immediately after the operation, the conjunctival sac was copiously irrigated with normal salt solution in order to clear the sac of any loose grains of sand; the lids were then everted and thoroughly scrubbed with gauze sponges and a 1 to 5,000 bichlorid solution (this was done also in the first fifteen). In the entire sixty cases there was no evidence of infection having occurred during the operation. Martin is convinced therefore that any attempt to sterilize the sandpaper is troublesome, unsatisfactory and entirely unnecessary. Immediately after the operation, the patients were kept in bed until they had recovered from the anesthetic, but no dressings or local applications were used.

Mississippi Medical Monthly, Vicksburg

January

147 Quinin in Malaria. J. T. Longino, Jonestown.
148 Fractures of the Skull. M. H. Roberts, Eberneezer.
149 A Case of Malarial Congestion. L. D. Harrison, Clarksdale.
150 Use of Gonococcus Vaccine in Chronic Gonorrheal Affections. S. T. Wells, Alligator.

Annals of Surgery, Philadelphia

January

151 Testing the Efficiency of the Collateral Circulation as a Preliminary to the Occlusion of the Great Surgical Arteries. R. Matas, New Orleans.
152 Anatomic and Surgical Desiderata in Exposure and Removal of the Hypophysis Cerebri. A. E. Schmitt, New York.
153 Treatment of Roentgen-Ray Ulcer. R. C. Turck, Jacksonville, Fla.
154 Posterior Gastro-Enterostomy, Three Years After Anterior Gastro-Enterostomy. M. A. Fauntleroy, U. S. Navy.
155 Non-Prostatic Urinary Retention of the Senile Bladder. M. W. Ware, New York.
156 Bone Abscess Treated with Moorhof's Bone Wax. C. C. Simmons, Boston.
157 Laceration of the Axillary Portion of the Capsule of the Shoulder-Joint as Factor in Etiology of Traumatic Combined Paralysis of Upper Extremity. T. T. Thomas, Philadelphia.
158 Disinfection of the Skin by Tincture of Iodin. C. L. Gibson, New York.
159 *Dry Iodin Catgut. A. V. Moschcowitz, New York.

159. **Dry Iodin Catgut.**—Ordinary catgut, just as it is bought from the dealers, is wound onto the well-known glass spools, in a single layer, and fastened at both ends, so as to prevent unravelling. It is then placed for five days in a 5 per cent. alcoholic solution of iodin in a tightly closed vessel (museum jar). On removal it is spread out on a sterile towel, covered by another sterile towel to faciliate drying, and is finally kept in a sterile container. Moschcowitz has proved to his own satisfaction, clinically as well as experimentally, that this dry iodin catgut is absolutely sterile. It is impossible to infect it by ordinary means. Its imbibition with iodin is not sufficient to act as an irritant on the tissues. Its tensile strength is superior to catgut prepared by other methods, and it is absorbed only after it has served the purposes for which it was intended.

Denver Medical Times and Utah Medical Journal

January

160 Case of Subglenoid Dislocation of the Shoulder (Erect Type), Avulsion of the Arm. M. E. Preston, Denver.
161 A Case of Strangulated Hernia. C. B. Dyde, Greeley, Colo.
162 Pericardium Penetrated by Needle. G. W. Miel, Denver.
163 A Tuberculous Muscle Tumor. F. C. Buchtel, Denver.
164 Some Passing Practices and Better Methods. B. O. Adams, Pueblo, Colo.
165 New Spinal Needle. C. G. Parsons, Denver.
166 Delayed Union of Fractured Limbs. H. G. Wetherill, Denver.
167 Repair of Fractures. G. F. Roehrig, Denver.
168 Diagnosis of Ureteral Problems. C. E. Tennant, Denver.
169 The Surgeon vs. the Physician. J. M. DeWeese, Denver.
170 Is Syphilis a Contagious Disease? F. Clift, Salt Lake City, Utah.
171 The Oral Hygiene Movement. E. C. Fairweather, Salt Lake City, Utah.

Memphis Medical Monthly

November

172 *Bacterial Vaccines a Factor in Therapeutics. W. Litterer, Nashville.
173 Injection Treatment of Infected Joints. M. G. Thompson, Hot Springs, Ark.
174 *The After-Care of Anterior Poliomyelitis. W. C. Campbell, Memphis.
175 Poliomyelitis. W. J. Wadlington, Memphis.

172 and 173. Abstracted in THE JOURNAL, Dec. 3, 1910, p. 2007.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 31

1 *Hyperchlorhydria and Its Complications. W. Russell.
2 *Distribution of Appendicitis, and Its Relation to Diet. O. T. Williams.
3 Clinical Study of Chronic Movable Kidney. P. Hicks.
4 *Use of Old Tuberculin Ointment in Diagnosis and Treatment of Lupus Vulgaris. A. Verge.
5 Cancer of the Breast. W. Mitchell.
6 *Cleft Palate Operations. T. S. Kirk.
7 A Case of Dwarfism. A. A. Jubb.

1. **Hyperchlorhydria.**—Russell summarizes the position by saying that if chronic gastric and duodenal ulcer be excluded, the question of operation depends on, first, the determination of the position of the inferior border of the stomach to the pyloric outlet; and second, on the prospect of being able to restore the sagged lower border. The first of these conditions is, in his experience, easy of attainment; the second depends on there being no natural or acquired barrier to the

passage of food through the pylorus or duodenum. On the accuracy of the answer to this last problem depends the accuracy of the prognosis, and it will determine the important question whether it is wise or not to try to restore a proper relation of stomach axis to outlet. It is, however, clearly stated by Russell, that many cases are most amenable to suitable medical treatment, but the attempt to cure all cases of ptosis —either partial or complete—can only end in loss of prestige to the physician. Physical laws hold here as elsewhere; and there are physical barriers to the emptying of some stomachs by the natural outlet—it is so impossible that it is simply fatuous to try to bring it about. Accuracy of diagnosis is not unattainable and on such accuracy or inaccuracy the physician's prestige naturally depends. If he attempts to cure what correct diagnosis would tell him he cannot cure, and the patient is driven by force of his misery into the hands of the willing operator, only one result can follow—namely, discredit to himself and the art he professes.

2. **Distribution of Appendicitis.**—A study of statistics has convinced Williams that appendicitis has a markedly different incidence in various countries, and that this different incidence may be largely a question of diet. Statistics show that where there is a large meat-eating population, appendicitis is a common disease, whereas in those countries where little meat is eaten, appendicitis is rare, if not almost unknown. There is no doubt that apart from improved diagnosis, appendicitis has greatly increased in the British Isles in the last few decades. Very little evidence has so far been advanced in explanation of this. The greatest change in the diet of the people has undoubtedly been the marked increase in meat eating. With the amount of foreign meat and canned food the poorer classes even are now able to supply themselves in fair quantity with meat of varying kinds, more particularly mutton. The fat of meat, more particularly that of mutton and beef, is characterized by the small amount of unsaturated fatty acid it contains. That the fat in the food determines the nature of the fat in the tissues is well known. From the clinical and chemical work quoted by Williams, it would seem that this factor determines the nature of the soaps to be found in the wall of the intestinal tract (probably as a manifestation of their excretion), and when these soaps are the calcium soaps of saturated fatty acids, there is usually some evidence of disease, either a mucous colitis or an intestinal lithiasis. In appendicitis, with which these two conditions are clinically associated, there is the same occurrence of these calcium soaps in the wall or in the lumen. In Williams' opinion, therefore, there is some evidence to connect the nature of the fat in the food with the incidence of the disease.

4. **Old Tuberculin Ointment in Lupus.**—As a means of diagnosis, Verge regards the application of tuberculin ointment of undoubted value. Numerous control tests were made by him in many other forms of skin diseases, such as psoriasis, lichen planus, sycosis, various forms of syphilis, dermatitis seborrheica, eczema, etc. In none of these did the typical reaction occur in the lesion, and the Moro reaction in the surrounding healthy skin was entirely absent. Therefore he thinks it may be fairly claimed to be a specific reaction occurring only in lupus. Several cases of doubtful diagnosis were cleared up, and so useful has the method proved that it is now employed in the skin department of the Royal Infirmary wherever there is any doubt as to the lesion not being lupus.

6. **Cleft Palate Operations.**—Kirk has used a continuous suture (No. 1 or 2 silkworm gut) in cleft palate operations with satisfactory results during the last three years. The operation he performs is the ordinary one with mucoperiosteal flaps in the case of the hard palate, and in the soft palate the latter is freed from the posterior margin of the bony palate and its muscles are divided. Apart from the ultimate good results obtained, he says that it will be found that this continuous suture can be inserted more rapidly and easily than the interrupted one, and that the necessity for great care to insert the stitches exactly opposite each other and to tie the sutures with the correct amount of tension is obviated. The ease and rapidity of operation makes the operation less serious, and it can easily be done when the child is 18 months old. The amount of tension to be put on this suture must be sufficient, after it has been put in and before it is finally tied, to prevent the escape of any bubbles from the nose to the mouth in any part of the line of suture, when the patient is breathing quietly. The suture is put in close to the edges of the flap, only taking up enough tissue to give a firm hold and not enough to invert the margins. The suturing is most easily done from before backward. The form of needle Kirk uses is a small Durham's cleft-palate needle, bent at a right angle to the right, and he inserts it from below on the right side and from above on the left side, usually rethreading before each introduction. Only about ½ inch of the silkworm gut should be passed through the eye of the needle, as the gut is apt to get frayed by the constant threading and unthreading. The suture can be left in for ten days or longer. He claims for a continuous suture that it gets rid of two of the causes of failure of union in cleft palate operations, namely, (1) imperfect apposition of the flap edges; (2) necrosis of the flap edges from stitch pressure; and that it considerably shortens the operation, thus materially diminishing the risk.

Lancet, London

December 31

8 Obesity and Certain Changes of Metabolism. O. Rozenraad.
9 *Simple Serodiagnosis for Tuberculosis: a Method of Obtaining an Immunity Index. V. B. Nesfield.
10 Clinical Aspects of Juvenile General Paralysis. J. J. Abraham.

9. **Serodiagnosis of Tuberculosis.**—With a view to discovering traces of immune substance in the serum of tuberculosis patients, Nesfield carried out a series of tests, taking as his basis the fact that the immune body combines with its specific bacterium or toxin, and that this bacterium-immune compound unites with complement. It is the principle employed by Wassermann for the diagnosis of syphilis. The procedure is described fully.

Australian Medical Journal, Melbourne

October

11 Acidosis and Acid Intoxication in Children. E. R. White.
12 Acetonuria and Acidosis. A. C. H. Rothera.
13 Sporadic Cerebrospinal Meningitis. M. Williams and R. Fowler.
14 Serotherapy of Epidemic Cerebrospinal Meningitis. G. A. Paton.
15 Brachial Neuritis Caused by Pressure of First Rib. T. Murphy.
16 Direct Examination of the Larynx, Trachea, Bronchi, and Esophagus. J. Murphy.
17 Quinsy. T. K. Hamilton.
18 Hemorrhagic Conjunctivitis. M. A. Schalit.
19 Hemorrhagic Mole. W. A. Wood.
20 Hemorrhagic Glossitis. R. A. Stirling.

Dublin Journal of Medical Sciences

December

21 Physiologic Effects of Alcohol. W. H. Thompson.
22 Tendencies of Modern Research in Veterinary and Human Medicine. E. J. McWeeney.

British Journal of Children's Diseases, London

December

23 Gangrene of Leg Following Diphtheria. J. D. Rolleston.
24 Chloroma. F. Tresilian.
25 Vaccine Therapy of Acute Infective Osteomyelitis. A. G. L. Reade.

Journal of Obstetrics and Gynecology of the British Empire, London

December

26 *Intraperitoneal Hemorrhage in Cases of Fibromyomata of the Uterus. A. J. Wallace.
27 *Torsion of the Fallopian Tube as a Factor in the Etiology of Hematosalpinx Apart from Extrauterine Pregnancy. A. L. McIlroy.
28 *Treatment of Eclampsia. J. W. Ballantyne.

26. **Intraperitoneal Hemorrhage.**—Wallace divides these cases into three classes: (1) the acute, in which the shedding of a large amount of blood is followed by a severe peritoneal crisis and general collapse; (2) the subacute or chronic, in which small or very moderate amounts of blood are shed at intervals, evidenced by mild signs of peritoneal disturbance of short duration, or by advancing anemia that is not explained by external losses or by general disease; (3) cases in which intraperitoneal bleeding occurs without evidence of its existence. In such cases the bleeding may have been pro-

voked by some exertion on the part of the patient. He reports seventeen cases in which the patients were submitted to operation. Death occurred in six cases—a mortality rate of 35.29 per cent.

27. **Torsion of the Fallopian Tube.**—The conclusions to be drawn from McIlroy's paper are that there is no one definite cause for the rotation of the pedicle, but that when torsion does take place followed by strangulation, there is an effusion of blood into the tissues and cavities of the organ or tumor involved. We may take it as proved in the majority of cases of hematosalpinx apart from ectopic pregnancy, that the cause is to be looked for in a torsion of the tube, as a rule at the uterine end. Predisposing causes such as congestive conditions, weakness of the vessel walls and tumors of the tube are to be taken into account. The exciting cause of the rotation may be found in the mobility of the tube in conjunction with increased intra-abdominal pressure. Peristaltic action of the lower bowel has undoubtedly some influence in favoring axial rotation. That torsion should occur in a perfectly healthy tube must be of rare occurrence, although histologic examination of series of tubes in the various stages of fetal development shows us that flexions of these organs are frequently present. The direction of the torsion and the number of twists are of little importance clinically, the degree of strangulation is what should be looked for on examination of the tube.

28. **Treatment of Eclampsia.**—For six years (1905-1910) Ballantyne has acted as physician in charge of the Edinburgh Royal Maternity Hospital during the autumn quarter, and in these eighteen months 2,214 patients were under his care. Thirty-eight of the patients suffered from eclampsia, or 1.7 per cent.; and five died, giving a maternal mortality of 13 per cent. During the autumn quarters of 1905, 1906 and 1907, there were twelve cases of eclampsia with three maternal deaths, or a mortality of 25 per cent.; while during the corresponding quarters of 1908, 1909 and 1910, there were twenty-six cases of eclampsia with two maternal deaths, a mortality of 7.6 per cent. The treatment employed in the latter period of time differed very markedly from that in vogue in the former. During the autumn quarters of 1905-1907, Ballantyne was still trusting in some measure to rapid emptying of the uterus, while in the corresponding quarters of 1908-1910, labor was hardly at all expedited. In the former years the maternal mortality was 25 per cent., in the latter it was only 7.6 per cent.; in the former years the fetal and infantile mortality was 75 per cent., and in the latter it was 42 per cent. Whether the eclampsia develops during pregnancy, during labor, or in the puerperium, Ballantyne orders venesection, transfusion with saline solution into the vein, washing out of the stomach with bicarbonate of soda solution, the introduction into the stomach of a large dose of magnesium sulphate, the use of a copious enema of soap and water and castor oil, and the hot pack. Obstetric interference has been put more and more into a secondary position.

Clinical Journal, London

December 14

29 Abortion. G. E. Herman.
30 Tuberculin Dispensaries and Sanatoria. A. M. Fraser.

December 21

31 Tuberculosis and Its Prevention. J. E. Squire.
32 Lymphadenitis. H. A. T. Fairbank.

Journal of Tropical Medicine and Hygiene, London

December 15

33 Recent Progress in Antityphoid Inoculation. R. H. Fox.
34 Growth of the Fungus of Tinea Imbricata on Artificial Media. A. Castellani.
35 Yaws. A. B. Duprey.

Medical Press and Circular, London

December 21

36 Primary Chronic Nephritis in Children. A. B. Marfan.
37 Fringes of the Cancer Problem. W. S. Handley.
38 Modern Ideas on the Pathology of Syphilis. W. D. Emery.
39 Tonsillar Abscess: a Historical Note. J. Knott.

Journal of Hygiene, London

November

40 Reports on Plague Investigation in India. M. Greenwood and S. Rowland.

Annales de Médecine et Chirurgie Infantiles, Paris

December 1, XIV, No. 23, pp. 725-760

41 Curable Forms of Acute Tuberculosis in Children. Aviragnet and L. Tixier.
42 *Index of Child's Physical Development. (Les divers indices numériques d'appréciation clinique de la robusticité chez l'enfant.) E. Gaujoux.
43 Perforated Duodenal Ulcer in Girl of 14. H. Bichat.

42. **Index of Child's Physical Development.**—Gaujoux thinks that a reliable estimate of the child's robustness can be obtained by dividing the weight by the length, using the metric system. The average normal weight at birth, 3 kg., divided by the average length, 50 cm., gives the index as 0.06 at birth. At 1 month, 3.75 kg. divided by 54 cm. equals 0.069; at 1 year, 9 kg. divided by 71 cm. equals 0.12; at the age of 5, 15 kg. divided by 100 cm. equals 0.15; at 10 years, 25.5 kg. divided by 130 cm. equals 0.19, and at 14, 35 kg. divided by 154 cm. equals 0.23. The index thus regularly increases with the child's growth, and he gives the index computed for each year of a child's life by this and other methods; no other formula, he says, seems to give such an instructive insight into the child's actual physical condition.

Bulletins de la Société de Pédiatrie, Paris

November, XII, No. 8, pp. 417-500

44 *Landry's Paralysis in Course of Epidemic Poliomyelitis. A. Netter.
45 Positive Wassermann Reaction in Rachitis. (Rachitisme syphilitique et séro-diagnostic.) H. Dufour and A. Huber.
46 Senile Type of Dwarf Growth Possibly of Suprarenal Origin. (Progeria de Gilford.) G. Variot and Pironneau.
47 Hydrocephalus as Sequel of Acute Meningitis. (Rapports de l'hydrocéphalie et des méningites aigues.) P. Harvier and G. Schreiber.
48 Syphilis as Common Cause of Adenoid Vegetations. H. Abrand.
49 *Serodiagnosis of Whooping-Cough by Hemolytic Test. (Diagnostic de la coqueluche fruste par la réaction de Bordet-Gengou.) Delcourt.
50 *Gastro-Intestinal Disturbances in Children from Standpoint of Tropical Pathology. J. L. Duenas.

44. **Epidemic Poliomyelitis.**—Netter states that recently he has encountered a number of cases of acute poliomyelitis in Paris, in which the children developed paralysis of the Landry type. He admits that the virus is transmitted generally in the nasopharyngeal secretions, and that healthy germ-carriers or those with only slight symptoms of the infection are mainly instrumental in carrying contagion. Prophylaxis, he says, should be based on these apparently well-established facts, with isolation of the sick and exclusion from school of children from families in which a case has occurred. The nasal passages should be disinfected. Other children in the family and other inmates of the house are rarely affected, although a few cases are known in which from four to seven children in the family developed the disease, and not always in unhygienic homes.

49. **Hemolytic Test for Suspected Whooping-Cough.**—Delcourt applied the complement-deviation test in a recent epidemic of whooping-cough and was able to reveal by this means a number of cases so mild that the infection was not suspected. He is confident that such cases of masked pertussis are common in children and adults, and that serodiagnosis may be important from the standpoint of prophylaxis.

50. **Gastro-Intestinal Disturbances in Children in Cuba.**—Duenas remarks that the influence of a tropical climate on children is shown most decidedly in Cuba by the frequency of gastro-intestinal disturbances even more than by the mortality. The long persistence of the heat is responsible for their development both in adults and children and the children seem to be born with a predisposition for various gastro-intestinal disturbances. At Havana are encountered, he says, all forms of digestive affections known and described by the classic writers of all countries. The abundance and toxicity of intestinal putrefactions, in connection with the enhancing of the virulence of infectious germs by the heat, compel especially energetic therapeutic measures.

Lyon Chirurgical, Lyons

December, IV, No. 6, pp. 513-612

51 Malignant Lipoma. (Classification de certaines tumeurs malignes.) L. Bériel.
52 *State of Other Kidney in Renal Tuberculosis. H. Fayol.

52. **Condition of Kidneys in Renal Tuberculosis.**—Fayol concludes from his research on this subject and clinical experience that incipient tuberculous lesions in the other kidney, but with normal functioning, permit the removal of the first kidney with pronounced tuberculosis. Delayed or refused operation is inevitably fatal, while, on the other hand, incipient lesions in the other kidney seem to be arrested by nephrectomy for a long time at least. Nonspecific lesions, albuminuria, etc., do not contra-indicate nephrectomy unless the albuminuria is excessive and accompanied by numerous tube-casts; signs of insufficiency of the kidneys indicate that parenchymatous nephritis is already installed. When one kidney is unmistakably, irreparably tuberculous and the other kidney is functioning badly, nephrostomy or exploratory nephrotomy should be done and the patient supervised for four or six weeks. During this time the true functioning of both kidneys can be estimated and secondary nephrectomy may become possible; in any event the primary nephrotomy is liable to give relief and improve conditions for the major operation later. With advanced tuberculous lesions in both kidneys even an exploratory nephrotomy may entail fatal anuria. At the last international surgical congress the mortality of nephrectomy after functional tests of the other kidney was reported as averaging now only 2.85 per cent., and Albarran's mortality is below 2 per cent.

Presse Médicale, Paris

December 17, XVIII, No. 101, pp. 945-960

53 *Idiopathic Curvature of the Neck of the Femur in Adolescents. (Les fausses coxalgies.) M. Savariaud.
54 Radiographic Diagnosis of Oxycephaly and Other Conditions with Excessive Pressure within the Skull. M. Bertolotti.

December 21, No. 102, pp. 961-968

55 Removal of Certain Bladder Tumors by Natural Passages. G. Marion.

December 24, No. 103, pp. 969-976

56 *Serotherapy of Typhoid Fever. A. Rodet and Lagriffoul.

December 28, No. 104, pp. 977-984

57 Serodiagnosis of Pott's Disease. (Réactions du liquide céphalorachidien au cours de la pachyméningite Pottique.) J. A. Sicard, Foix and Salin.
58 Technic for Injection of Salvarsan. P. Ravaut.
59 Technic for Preparing Albumin Milk. (Le lait albumineux.) G. Schreiber.

53. **Coxa Vara of Adolescents.**—Savariaud discusses cases of what he calls "false coxalgia," the curvature of the neck of the femur causing pains for which no inflammatory origin can be discovered. He has encountered seven cases in the last few years and calls attention to the three instructive signs of the condition, namely, the shortening of the leg with the great trochanter unduly high, the rotation of the tip of the foot outward with adduction of the knee, and the non-interference with the movements of the leg except with abduction and inward rotation. This triad of symptoms, he states, is seen only in spontaneous coxa vara and in old fractures of the neck of the femur, improperly called traumatic coxa vara. The hip joint may be ankylosed or not, and the shortening of the limb may be more or less pronounced. The trouble is due generally to defective growth of the bones—some parts developing too rapidly for the rest, and the persons thus affected are usually tall and lanky, with a tendency to flat-foot, genu valgum and poor circulation in the extremities. On this soil any overexertion, too long standing, etc., are liable to develop the false coxalgia. When the curvature of the femoral neck is recognized early, treatment should be mainly prophylactic—relieving the limb of the weight, having the youth change work if need be to relieve him from too much standing, or arranging his work so that he can sit. If there is concomitant arthritis, treatment should be by rest and continuous extension. If the deformity is well established, resection of the head and neck of the femur might be considered, but the ultimate outcome scarcely justifies such extensive interference and the wearing of a higher sole usually answers the purpose. On the other hand, when abduction is much limited and radiography shows that this is due mainly to the encroachment of the great trochanter on the ilium, resection of the enlarged trochanter is a good palliative operation.

56. **Serotherapy of Typhoid.**—Rodet and Lagriffoul have used an antityphoid serum of their own make in sixty-five cases of typhoid and the results, they state, have been gratifying. The serum acts best when given early, within eight or nine days or up to the eleventh day, and the infection must be pure, without associated infection. The serum seemed to abort the disease under these conditions in many cases, they state, and to render it much milder in the others and to shorten convalescence. The patients treated were in the Montpellier and Lyons hospitals; some were also given baths, others not.

Revue de Chirurgie, Paris

December, XXX, No. 12, pp. 1081-1248

60 Bismuth Paste in Treatment of Cold Abscesses. (Traitement conservateur des abcès froids.) E. G. Beck.
61 *Technic for Ligation of Subclavian Artery. (Technique opératoire de la ligature de la sous-clavière en dedans des scalènes et dans le médiastin.) P. Duval.
62 *Isolated Fracture of the Transverse Processes of the Lumbar Vertebræ. J. Tanton.
63 *Ulceration of the External Iliac Artery from Pressure of Drain in Appendiceal Abscess. Caraven and L. Basset.
64 *Origin of Hypertrophy of the Prostate. E. Marquis.

61. **Ligation of Subclavian Artery.**—Duval has successfully ligated the subclavian in three recent cases, and states that Monod found no fatalities among the last ten cases he has compiled from the literature. There is, therefore, he thinks, no need to regard the measure as exceptionally serious if done after temporary resection of muscle and bone to give access to the region. The skin is incised so as to permit temporary resection of the inner third of the clavicle, the left half of the manubrium and the first costal cartilage in one block. Resection of the clavicle is indispensable to ligate the subclavian properly, he declares. The article is illustrated.

62. **Isolated Fracture of Transverse Processes.**—Tanton refers in particular to the transverse processes of the lumbar vertebræ. This lesion is one of the latest to be revealed early by radiography, and the disturbances resulting from it are generally mistaken for other traumatic or post-traumatic affections of the lumbar region. Only fifteen cases of the kind have been reported, he believes, and he adds two to the list. Pain is the chief aid to diagnosis; it may be more or less localized and more or less severe, with sometimes pain in moving the legs. The local pain is usually intense at the moment of the fracture and it may radiate into the adjoining parts or follow the sciatic nerve; or the anterior abdominal wall may be tender. When the fracture involves the transverse process of the first lumbar vertebra the pain may be so severe as to interfere with respiration and immobilize the diaphragm. The patient generally lies on his back and efforts to raise the leg on the side of the fracture are usually extremely painful, as is also bending the trunk forward. When the trunk is flexed, the lumbar curvature increases in case only one process is fractured, while the curvature flattens out if several are involved. There is little if any pain as the trunk is bent backward, unless the fracture involves the fifth transverse process. The patient picks up an article from the floor like a person with Pott's disease; the gait is also characteristic, the knees are bent, the arms akimbo. The lesion generally heals in about a month without leaving appreciable traces, but in two of Haglund's cases the pains persisted for two years, and in Hoffmann's case an ossifying myositis developed. If the disturbances persist, the fractured process may be removed, as has been done in one case; in two others the hematoma in the region suppurated. In the first, the necrotic broken-off piece of the process maintained a purulent fistula, requiring two operations before recovery. In the other case the trouble was ascribed to a retrocecal abscess, and notwithstanding two operations the patient succumbed to suppurative psoitis and pneumonia. Any contusion of the lumbar region leaving persisting pain and functional disturbances should be examined for isolated fracture of one or more of the transverse processes.

63. **Ulceration of Iliac Artery in Contact with Drain Tube.** Caraven and Basset report a case of hemorrhage from this cause after an operation for an abscess of appendicitic origin. Immediate ligation of the artery saved the patient, but this was not always possible in the four or five other cases of which they have learned. Only for two of these patients was immediate surgical relief possible, and these were the only patients who recovered; another survived the hemorrhage, but succumbed to resulting peritonitis. In one case the hem-

orrhage was internal. Such complications should be prevented by not letting the drain reach in far enough to touch the artery.

64. **Hypertrophy of the Prostate Often a Suburethral Tumor.**—Marquis reports research on the pathologic anatomy of so-called hypertrophy of the prostate, which confirms the clinical conclusions to the effect that in the majority of cases the apparent enlargement of the prostate is in reality an extraprostatic, suburethral reaction to traumatisms of the region in the course of micturition or to infections by way of the urine or both. Comparison of the findings in 949 prostatectomies on record, shows, he says, that Freyer's method of enucleating the benign suburethral tumor, paying no attention to its source of origin, gives better results than perineal prostatectomy. The latter has a record of orchitis in nearly 25 per cent., of perineal fistula for more than three months in about 13 per cent., of incontinence in 10 per cent., and of complete retention or rectal fistula in 6 per cent., while none of these complications and little, if any, impairment of the sexual function occur with the transvesical technic except orchitis in 1 per cent. and retention in less than this proportion. The greatest argument in favor of the transvesical route, however, is that some of the most ardent advocates of the perineal route, a few years ago, seem now to have abandoned it completely.

Semaine Médicale, Paris

December 21, XXX, No. 51, pp. 595-608

65 Viscosity of the Blood and Its Clinical Significance. (Valeur clinique de la viscosité du sang.) L. Chelnisse.

December 28, No. 52, pp. 609-616

66 *Salpingitis and Laminaria Tents. R. de Bovis.

66. **Salpingitis in Relation to the Use of Tents.**—De Bovis discusses a recent communication on the frequency of evidences of salpingitis in women who have had the os uteri dilated with tents preliminary to curetting. He does not believe that the tents introduced germs, but that by obstructing the outlet to the uterus they induced stasis which favored the development of otherwise harmless germs already present, the germs rapidly acquiring virulence and setting up inflammation in the tubes. Amersbach thus found microscopic traces of inflammatory processes in the tubes in 42 per cent. of twenty-six women operated on for tubal sterilization. The inflammation seemed to have been transient and harmless, and even this was absent in the non-puerperal cases, but de Bovis reports a case of pelvic peritonitis evidently resulting from the tent dilatation in a non-puerperal case. There is a possibility of pre-existing gonorrheal inflammation in this case, but no one can guarantee against this in any case. On the whole, it is much safer, he says, to refrain from the use of tents.

Archiv für Gynaekologie, Berlin

XCII, No. 2, pp. 279-605. Last indexed Dec. 17, 1910, p. 2187

67 Etiology of Hematoma in Vulva or Vagina. C. Wimpfheimer.
68 Inflammatory Processes in the Adnexa. (700 Fälle von entzündlichen Adnextumoren.) L. Goth.
69 Dermoid Cysts and Their Metastasis. S. Boxer.
70 *Pregnancy Liver and Atypical Eclampsia. (Zur Physiologie und Pathologie der Schwangerschaft.) G. Schickele.
71 *Heart Defects and Pregnancy. (Die Prognose von Schwangerschaft, Geburt und Wochenbett bei Herzfehlern.) R. T. Jaschke.
72 *Eclampsia Possibly an Anaphylaxis from Fetal Albumin. J. Thies.
73 Phlegmasia Alba Dolens. (Entwicklung des Begriffes und die Bedeutung der Phlegmasia alba dolens.) P. Kroemer.
74 Case of Peritoneal Pregnancy. J. F. M. Hammacher.

70. **Eclampsia.**—Schickele has become convinced by his clinical experience and study of the literature that eclampsia occurs in various forms and degrees, ranging from the typical manifestations with convulsions, through the atypical form without convulsions and the severe, sometimes fatal, uncontrollable vomiting of pregnancy, to a condition in which there may be only a few symptoms showing that something is wrong. These symptoms are peculiarly violent, including salivation, exanthems, peripheral neuritis, vomiting, disturbances in vision, "pregnancy disturbances," etc. Jaundice may occur alone or with any of the above conditions. The liver may be specifically pathologic without any of these symptoms. It is probable, he thinks, that the changes in the liver and other organs in eclampsia are the result of an intravital autolysis of the liver due to some still unknown eclampsia toxin. Chemical research on urine, etc., has not afforded any bases for better knowledge of the nature of eclampsia, to date.

71. **Heart Defects and Pregnancy.**—Jaschke analyzes the experiences with 1,548 women with heart defects delivered at von Rosthorn's clinic at Vienna; this was 1.47 per cent. of the total 37,014 deliveries during the last ten years. On the basis of this extensive material, his conclusions are more favorable than those of most writers on the outcome of a pregnancy with a pre-existing heart defect. He even declares that a heart defect should be regarded and estimated during a pregnancy exactly the same as outside of a pregnancy. The mortality was from 0.32 to 0.39 per cent., and in all the fatal cases the heart defect was exceptionally serious or combined with myocarditis. In seven-eighths of the cases the pregnancy proceeded to normal delivery at term. In only 4 per cent. was there spontaneous abortion, and spontaneous premature delivery in only 4.5 per cent. No special influence from the nature of the valvular defect was apparent, but failing compensation favors premature interruption of the pregnancy. In some cases the women seem to become accustomed to the heart defect with recurring pregnancies. Artificial interruption of the pregnancy was necessary in 1 per cent. of the cases on account of severe failing compensation. Functional tests of the heart decide the question as to whether the patient can stand the strain of delivery or not, especially Katzenstein's test (described in THE JOURNAL, July 9, 1904, page 159), and the Koranyi test (described Oct. 2, 1909, page 1141). In the severer cases operative sterilization of the woman may be advisable if the condition renders further pregnancies too dangerous. An undisturbed course of the pregnancy may be counted on in 96 per cent. of all cases; danger need be feared, as a rule, only when the heart defect is particularly severe, or the myocardium involved, or when there is complicating nephritis. Even with slightly failing compensation the delivery proceeded without disturbance in 98 per cent. of all his cases; there was no special tendency to atony and no special indications—on account of the heart defect—were encountered at any stage of labor. The delivery must be supervised by the obstetrician with exceptional care, however, especially in the period of expulsion in order to act immediately if any procedures become necessary. No operative procedure, he insists, is contra-indicated by the heart defect in itself. Scrupulous asepsis is more imperative in case of heart defect than under other conditions, as puerperal infection has special dangers for such patients. During the puerperium, the woman with a heart defect is not exposed to any more dangers on this account than the healthy, but she should be kept in bed a little longer to reduce the demands made on the heart. There is nothing to contra-indicate breast nursing. Any involvement of the myocardium naturally renders the prognosis graver. Age is also an unfavorable factor, as likewise the depressing influences of a large number of pregnancies occurring at short intervals.

72. **Etiology of Eclampsia.**—Thies injected rabbits with serum from fetuses and found that the gravid animals reacted with a kind of anaphylactic syndrome suggesting the symptoms of eclampsia. The same effect was obtained also to a very slight degree and much more slowly in the non-gravid animals. He thinks that the results of his research suggest that eclampsia is a kind of anaphylaxis induced in the maternal organism by the alien albuminous substances in the serum of the fetus.

Archiv für Verdauungs-Krankheiten, Berlin

December, XVI, No. 6, pp. 627-804

75 Ferments in Testing Gastric Functioning. (Experimentell-vergleichende Untersuchungen über den klinischen Wert der neueren Magenfermentproben und die Wesenseinheit von Lab und Pepsin.) P. Cohnheim.
76 Secreting Cells in Small Intestine. (Ueber die Panethschen Zellen des Dünndarmes.) L. Fischl.
77 Amebic Dysentery. E. Axisa.
78 Favorable Influence of Hydrogen Dioxid on Hyperchlorhydria. (Klinische und experimentelle Erfahrungen über den Einfluss des Wasserstoffsuperoxyds auf Hyperchlorhydrien und auf die Magensekretion.) F. Poly.
79 Palpation of Appendix. N. M. Rudnitzki.
80 Digestion of Cellulose. (Zelluloseverdauung bei dem Menschen.) F. Schilling.

81 Membranous Enteritis in Typhoid Fever. N. Ortner.
82 *Pain in Diagnosis of Gastric Cancer. (Zur Diagnose des Magenkarzinoms mit besonderem Hinweis auf das Schmerzsymptom.) B. Erlanger.

82. Pain in Chest or Shoulder as Early Sign of Gastric Cancer.—Erlanger describes five cases in which attacks of pain, diagnosed in some instances as intercostal neuralgia, were the only or the principal sign of an unsuspected gastric cancer. The first patient was an elderly man whose violent pains in the left side of the thorax were accompanied by the tender points characteristic of intercostal neuralgia. The pain occurred at first spasmodically, but later became more continuous and was increased by movements of the body. The patient was sometimes kept awake at night by the pains, and began to grow thin; no improvement followed courses at various sanatoriums for the supposed neuralgia, but tests of stomach functioning revealed a lack of free hydrochloric acid and abnormally low total acidity. The stomach tube encountered a slight obstruction near the cardia, and the possibility of a neoplasm at this point was suggested, but the pains then subsided and did not recur under bed rest. The suspected cancer made itself manifest a few months later. There was evidently a carcinomatous lymphangitis in this case with infiltration of the paravertebral tissue, inducing the neuralgiform pains. The second patient was a man of 37, healthy until slight gastric disturbances were noted, and at one time an attack of pain in back and upper abdomen so severe that he consulted a physician who prescribed codein. The stool was black one day about this time. The "neuralgia" returned occasionally and the patient was put on a special diet. Not long after this a very severe attack of pain came on one night, leaving the abdomen tender. As the attacks of pain kept recurring and with great intensity, the patient consulted several physicians, but none made any special diagnosis, until Erlanger tested the stomach functioning, finding no trace of free hydrochloric acid. Necropsy later revealed a gastric carcinoma that had developed on the basis of an old gastric ulcer. During the clinical study of the case there had been nothing to suggest malignant disease except the lack of free hydrochloric acid. The clinical picture had been solely attacks of pain resembling in some respects gallstone colic. In the third case an apparently healthy man of 32 developed symptoms of gastric ulcer, subsiding spontaneously, but returning about a year later for a brief period. Some time after this he had severe pains in the back, which were most severe when reclining. The pain was not continuous, but at times so severe that the man screamed. The attacks generally lasted an hour or two, and sometimes required morphin. The pains radiated to the shoulders and leg at times, but there were no signs of a tumor; the patient could not eat meat and had no appetite, while the increasing weakness and depression suggested malignant disease, but there were no signs to localize it except one enlarged gland in the left supraclavicular region. Necropsy disclosed a carcinoma in the lesser curvature of the stomach extending into the paravertebral tissue. There had never been fever, but sweat crises had been frequent toward the last. In the third case a manifest cancer in the stomach was accompanied by intense pain at times in the back and sacral region. It is assumed that the cancer in this case has also spread to the posterior wall of the abdomen, or there is metastasis in the tissues adjoining the spine, but the patient is still living. The fifth case is that of a man of 40 whose father and mother had both died of cancer, and a brother has cancer of the rectum. The objective findings suggested benign stenosis of the pylorus on the basis of an old gastric ulcer, especially as the stomach chemistry appeared to be normal. The patient consented to a gastro-enterostomy, but a carcinoma was found at the pylorus with metastasis in the greater omentum. There were no special pains in this case; but the extreme weakness and loss of appetite dominated the clinical picture. Erlanger discusses in conclusion what has been written on the pains with gastric cancer—they are generally described as nothing well defined or characteristic—and reviews the points that differentiate the pain from other causes. The main point is to think of the possibility that the neuralgiform pains may be due to cancerous involvement of the regions innervated by the intercostal, lumbar or sacral nerves.

Beiträge zur Geburtshilfe und Gynäkologie, Leipsic

XVI, No. 1, pp. 1-198. Last indexed Aug. 27, 1910, p. 809

83 Placenta Marginata and Placenta Implanted in the Cornua. (Placenta marginata und Verhalten der Tubenecken in der Schwangerschaft.) H. Bayer.
84 *Cesarean Section for Placenta Implanted Between Body and Cervix. (Isthmusplacenta und Kaiserschnitt.) O. Pankow.
85 The Isthmus of the Uterus. O. Büttner.
86 Pelvis Deformed from Trauma of Articulations. (Ueber ein Lazerationsbecken.) A. Sitzenfrey.
87 Origin of Cystic Tumors in the Ovary. (Herkunft cystischer Gebilde der Ovarien.) G. Schickele.
88 *Hysterectomy for Puerperal Sepsis. (Zur Frage der Exstirpation des septischen Uterus.) G. Schickele.

84. Cesarean Section for Placenta Implanted Between Body and Cervix.—Pankow advocates abdominal Cesarean section with placenta prævia, and states that he had no mortality among the twenty-three women treated in this way, while eight died of the forty-nine others, and he is convinced that six might have been saved by prompt abdominal Cesarean section. The children were delivered in good condition in the twenty-three Cesarean section cases, except one who had inhaled amniotic fluid.

88. Hysterectomy in Puerperal Sepsis.—The great question, of course, is whether the puerperal septic process is limited to the uterus or not. The only way to learn how to recognize these cases, Schickele affirms, is to examine the uterus after its removal and compare the anatomic changes with the preceding clinical course in every case without fail, striving to obtain premises for certain general conclusions. At necropsies also the anatomic findings in the uterus should be studied and compared with the record of the clinical course. He describes a number of typical cases from his own experience, which demonstrate, among other things, that severe puerperal infection may develop without the uterus itself becoming diseased. The pathogenic germs may penetrate through the intact uterus wall into the general circulation, and general symptoms of sepsis and metastasis are then the first signs of trouble. In this group of cases, hysterectomy would be useless, as the uterus itself is not diseased. High fever for several days suggests a possible progressive inflammatory process inside the uterus, and this suspicion is strengthened by development of symptoms of peritonitis. The indications are especially urgent when there has been some preceding intra-uterine intervention. The vicinity of the uterus should be free from infiltration, and there should be no signs of general infection for the indications in this class of cases to be beyond question. The third category includes the cases in which fever persists after some intra-uterine procedure, and soon afterward chills follow or germs are found in the blood, or both occur together. In these cases the uterus should be removed without delay in the hope of forestalling general infection. If a few days have elapsed before the chills and sepsis develop, then the hysterectomy comes too late, especially if signs of metastasis have manifested themselves in the meanwhile. At the same time, Schickele continues, if the chills and sepsis do not follow the intra-uterine intervention until after several days, with continuous fever in the interim, hysterectomy is indicated without delay in the hope that the mischief may be confined to the uterus, or at least that removal of the primary focus may bring relief. This applies also to cases in which the uterus has been injured. The trend of the times, he believes, is unmistakably toward operative treatment of puerperal fever. One of the cases reported in detail shows the importance of the slightest signs of peritonitis as an indication that the process is spreading beyond the uterus and that in immediate hysterectomy lies the only salvation of the patient. It was not done in this instance, and this lesson was learned from the necropsy findings in this and in some other cases. Another case teaches that signs of severe infection still persisting after manual separation of the placenta are an indication that the process is spreading, but that the immediate removal of the uterine focus may abort it. The general condition is the criterion in puerperal infection almost more than in any other circumstances. In one case of febrile abortion requiring intra-uterine intervention entailing considerable laceration, the general condition was good and the patient rapidly recovered. In two cases with signs of severe general infection in the first week, including swelling of a finger and decubitus, there were no signs of local

trouble in the uterus after the intra-uterine intervention, and necropsy in both revealed the uterus in good physiologic condition; the puerperal infection had penetrated the walls and set up fatal sepsis, leaving the uterus unmolested. Most of the various cases reported are instructive, because the necropsy findings are compared with the clinical records and clinical impressions, and Schickele urges others to do this at every opportunity as the best means to obtain light on this important subject of puerperal infection.

Berliner klinische Wochenschrift

December 12, XLVII, No. 50, pp. 2277-2328

89 *Treatment and Diagnosis of Progressive Paralysis. K. Bonhoeffer.
90 *Tardy Reaction After Salvarsan. Goldbach.
91 *Eventual By-Effects on the Cranial Nerves from Salvarsan. J. H. Rille.
92 *Salvarsan in Therapeutics. (Praktisches und Theoretisches vom Arsenobenzol Ehrlich-Hata 606.) K. Touton. Commenced in No. 49.
93 Importance of Salt for Metabolism. (Bedeutung des Kochsalzes für den Stoffwechsel.) H. Strauss.
94 Epidemic Poliomyelitis. (Neuere Erfahrungen über die akute spinale Kinderlähmung.) R. Cassirer.
95 *Urine Findings in Diagnosis of Cancer. (Verwertung des Harnbefundes zur Carcinomdiagnose.) E. Salkowski.
96 *Drainage into Abdomen of Spina Bifida and Hydrocephalus. B. Heile.
97 Otosclerosis. G. Brühl.
98 Theory of Anaphylaxis. E. Friedberger.

89. **Progressive Paralysis.**—Bonhoeffer does not think that the recent achievements in serology and the introduction of salvarsan have been of much service in the diagnosis and treatment of progressive paralysis. In fully 15 per cent. of the cases, he says, we may anticipate remissions in the course of the disease during the early stages. A patient entering on a phase of remission should not be reported as "recovered" under the drug that he happened to be taking at the time. If the weight begins to increase, a suspicion of a remittent phase is justified. He further emphasizes the point that true syphilitic processes may coexist with the changes responsible for the paralysis, and consequently benefit will follow as the former subside under specific antisyphilitic measures.

90. **Tardy Reaction to Salvarsan.**—Goldbach reports that at the clinic for cutaneous skin diseases in charge of Lesser, several cases have been observed in which an eruption, angina and gastro-intestinal disturbances developed in from seven to ten days after injection of salvarsan for syphilis. The phenomena were observed, together with an extremely violent reaction at the point of injection, the whole picture suggesting a toxic syndrome due to the arsenic or to the production of antibodies in consequence of the medication.

91. **By-Effects of Salvarsan Involving the Cranial Nerves.**—Rille states that recurrence has been observed in fourteen of the forty syphilitics kept under observation since treatment with salvarsan. He further reports three cases in which patients with recent infection developed severe symptoms on the part of the cranial nerves. In the first, deafness came on four weeks after the injection, facial paralysis two weeks later, and choked disc a week and a half later. The patient was a robust girl of 21. The second patient was likewise a previously healthy girl of 18, infected with syphilis about four months before the injection of the drug. Nearly eight weeks afterward headache and vertigo developed, followed three weeks later by right facial paralysis and after another week by bilateral optic neuritis and right fourth nerve paralysis. In the third case a blacksmith became deaf nearly thirteen weeks after the injection, given three months after primary infection. Only one of these patients had recovered entirely at date of writing. Rille adds that complications of this kind have never been observed after mercurial treatment, but he does not venture to decide whether they are manifestations of the Herxheimer reaction or the result of an especial affinity of the drug for the nerve tissue.

92. **Action of Salvarsan.**—Touton explains the failure of salvarsan to kill all the spirochetes as due to the fact that it is unable to reach all of them. In order for it to display its destructive action on the spirochetes, they must be mobilized and brought out from their lurking places so that the drug can act on them. He suggests that this might possibly be accomplished by preliminary treatment with some drug which would mobilize the spirochetes, seeking them out and driving them out into regions accessible for the salvarsan. This may be done by means of the ordinary physical measures, exercise, massage, baths and sweating procedures, or they may be supplemented by iodids. He regards the intravenous technic as best for administration of the salvarsan, and reports some cases in which it seemed to display therapeutic action on spirochetes other than the pallida.

95. **Urine Findings in Diagnosis of Cancer.**—Salkowski and Kojo have worked out a simple method for determination of the nitrogen precipitated by salts of the heavy metals in relation to the total nitrogen output. The average in the urine of ten healthy persons was 1.22 per cent., while in ten cancer patients it averaged 3.03 per cent., the maximum being 4.62 per cent. The minimum, 2.15 per cent., was never reached in healthy urine. These facts are suggestive, but further experience is needed to determine whether the different findings are pathognomonic of malignant disease. The technic is simple; the filtrate corresponding to 100 c.c. of urine is neutralized with acetic acid and precipitated with lead subacetate; the precipitate is then quantitatively collected, rinsed and its nitrogen content ascertained. The figure representing this is then compared with the total nitrogen from 100 c.c. of urine to show the percentage of the latter represented by the former. The phosphoric and sulphuric acids in the urine must first be removed by the ordinary barium-chlorid process. Zinc chlorid or zinc sulphate can also be used for determination of the nitrogen precipitation with or without preliminary removal of the phosphoric acid with calcium chlorid or hydrate.

96. **Surgical Treatment of Spina Bifida with Hydrocephalus.**—Heile reported last year his attempt to ensure permanent drainage of the cerebrospinal fluid into the abdomen in a case of this kind. He sutured a loop of small intestine, drawn out near the spina bifida, to the open dural sac, and the drain answered its purpose perfectly, but so much fluid was thus drained away so abruptly that the child succumbed to this and the effects of the laparotomy necessary to draw out the bowel. To avoid these drawbacks he now drains the fluid into the abdomen by means of a wick of six silk threads introduced into the dural sac at one end and carried through a subcutaneous passage into the side of the abdominal cavity, into which it protrudes near the costal arch. The minute incisions rapidly healed in the case reported. The 2-days-old infant was kept lying on his back with the pelvis raised for a time to prevent too rapid drainage. The child has no further signs to date of the spina bifida and hydrocephalus for which the operation was done. The various steps of the operation are shown in three illustrations.

Deutsches Archiv für klinische Medizin, Leipsic

CI, Nos. 1-2, pp. 1-208. Last indexed Dec. 24, 1910, p. 2274

99 The Heart Sounds and the String Galvanometer. (Aufzeichnung von Herztönen mit dem Einthoven'schen Saitengalvanometer und Untersuchungen über Galopprhythmus.) W. v. Wyss.
100 Lymphosarcomatosis and a Positive Wassermann Reaction. F. Trembur.
101 Prevention and Treatment of Catarrh. W. Ebstein.
102 Improved Spirometer. (Zur spirometrischen Methodik.) R. Siebeck.
103 Blood and Heart Findings with Nitrobenzol Intoxication. R. Massini.
104 Hemoglobinuria with Muscular Paralysis. (Eigenartiger mit Muskellähmungen verbundenen Fall von Hämoglobinurie.) F. Meyer-Betz.
105 The Nucleus Test of Digestive Processes. (Die Grundlage der Ad. Schmidt'schen Kernprobe.) F. W. Strauch.
106 Internal Drug Antisepsis. (Zur Frage der inneren Desinfektion.) A. Knick and J. Pringsheim.
107 Action of Albumin Bodies and Albuminoids on Coagulation of Blood. (Einwirkung von eiweissartigen und Eiweisskörpern auf die Gerinnbarkeit des Blutes.) H. Grau.
108 Roentgen-Ray Diagnosis of Gastric Cancer. (Bedeutung der Röntgenuntersuchung für die Diagnose des Magencarcinoms.) M. Faulhaber.
109 Velocity of Blood Stream in Anemia. (Zur Frage der Blutgeschwindigkeit bei Anämie.) V. Welzsäcker.

Deutsche medizinische Wochenschrift, Berlin

December 22, XXXVI, No. 51, pp. 2369-2416

110 *Obstetric Version. (Indikationen und Technik der Wendung.) K. Baisch.
111 Diabetic Lipemia. G. Klemperer.
112 Salvarsan in Syphilis. J. Jadassohn.
113 Action of Salvarsan on Spirochetes in Mouth. P. H. Gerber.
114 Emotional Instability of Blood-Pressure. (Psychogene Labilität des Blutdruckes und ihre Bedeutung in der Praxis.) P. Schrumpf.

115 Cultural Differentiation of Paratyphoid and Enteritis Bacteria. R. Müller.
116 Cholera Not Result of Nitrite Poisoning. (Zur Emmerichschen Theorie des Choleragifts.) H. Schidorsky.
117 Blood-Count Technic Applied to Organized Elements in Urine. (Zur Methodik der Zählung organisierter Harnelemente.) A. Kakowski.

110. **Indications and Technic for Version.**—Baisch cites statistics from Döderlein's and other clinics which show that version is applied on an average in about 1.5 per cent. of deliveries and forceps in about 2.4 per cent. In the clinics forceps and version are applied in 4 per cent., that is, in about one-third of all the operative births, while in general practice they are applied in two-thirds of all the operative deliveries. Decapitation and perforation, he declares, amount to 0.8 per cent. of all operative deliveries in the clinic and 0.1 per cent. in general practice. These figures confirm his impression that the mutilating operations are far too rare in private practice, as these alone are harmless for the mother, while the operations which presumably spare the child, but are fraught with danger for the mother, are far too frequent. His statistics show further that the mortality of the children with version amounts to 50 per cent., not including the infants who die soon after birth, which brings the total mortality from version up to 70 per cent. With this imposing mortality of the children with version, we are fully justified, he says, in seeking to restrict its application in favor of perforation of the fetus. If half of all the versions were omitted and in their place a mutilating operation done, the results for the children would be the same, he declares, but for the mothers it would be incomparably better. In a recent case, a physician doing version for a supposedly living child, found it had been dead for some time, and he then perforated the fetal head and tried to express the placenta by the Credé method, but found it impossible, and then discovered that the uterus had been completely ruptured. The woman died from peritonitis and the physician was sued for malpractice. Even though such results of version are extremely rare, yet difficult version is liable to induce severe injury, infection and long illness; think of the consequences of injury of the bladder or rectum, he exclaims. In the interests of the mother we must select with the greatest care the cases in which version is indicated.

Medizinische Klinik, Berlin

December 18, VI, No. 51, pp. 2005-2044

118 *Gastric Ulcer. (Behandlung des runden Magengeschwürs.) G. Singer.
119 Moving Pictures as Aid in Studying and Teaching Nervous and Mental Diseases. H. Hennes.
120 Value of Combining Suggestion with Physical Measures in Treatment of Heart Disease. M. Herz.
121 *Insufficiency of the Vertebræ. G. Zuelzer.

118. **Gastric Ulcer.**—Singer reviews his experience with gastric ulcer, and says that feeding by the rectum is the only safe method in cases complicated with severe hemorrhage. In two such cases the attempt to commence the Lenhartz diet brought on serious hemorrhage anew, but restriction to nutrient enemas soon placed the patients on the road to recovery, and then the Lenhartz diet was tolerated without inconvenience and the final outcome was unusually good. He emphasizes the importance of rest and refraining from violent exertion for months and years; patients who have had a gastric ulcer must regard themselves as constantly liable to bring on new disturbances by errors in diet and overexertion. Two patients had had repeated small hemorrhages from a duodenal ulcer, but all disturbances ceased after a Lenhartz course, and the health was apparently perfect for months, when lifting a heavy weight or pushing a heavy table brought on the whole train of symptoms again. The patient should keep in touch with his physician for years and return at the slightest symptom suggesting the flaring up of the trouble. Singer calls particular attention to an early sign which he has found practically constant; this is a sensation of discomfort or pain radiating from the epigastrium toward the costal arches and thence along the intercostal nerve routes to the spine. The regularity of the appearance of this pain or sense of discomfort, especially in connection with eating, is characteristic, and almost pathognomonic of gastric ulcer, even when there is scarcely any dyspeptic disturbance.

121. **Insufficiency of the Vertebræ.**—Zuelzer calls attention anew to the disturbances which Schanz has described as resulting from insufficiency of the vertebræ analogous to the condition with flat-foot. Schanz' description was given in THE JOURNAL, Oct. 12, 1907, page 1318, and Zuelzer's experience has confirmed its accuracy in every detail. He found it associated with flat-foot in twenty-three cases. Rest and relief from weight-bearing are the main points in treatment, with massage in the milder cases, but the parts should be left at peace to recuperate in the severer cases. An expensive supporting corset is not necessary. Zuelzer has two long elastic strips of steel run into an ordinary corset, parallel to the spine, and has found that this answers the desired purpose.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXII, No. 2, pp. 173-310. Last indexed Nov. 19, 1910, p. 1852

122 *Blowing Out the Pleural Effusion and Other Pathologic Accumulation of Fluids Instead of Aspirating Them. (Ausblasung anstatt Aspiration von Pleuraergüssen.) I. Holmgren.
123 Neuralgia of the Base of the Fourth Toe: Morton's Metatarsalgia. (Die Mortonsche Form der Metatarsalgia.) G. C. Bolten.
124 Anemic Gangrene and Ulceration in Intestine as Result of Simple Distention. (Experimentelle Untersuchungen über die Entstehung von sogen. Dehnungengeschwüren des Darmes.) K. Shimodaira.

122. **Blowing Out Instead of Aspirating Pleural Effusions.**—This article first appeared in *Hygiea*, Stockholm, September, 1910. Holmgren's experience now includes seventeen cases in which he has applied this measure. His technic differs considerably from that previously used for evacuation of pathologic effusions. Air is pumped in at an opening above to take the place of the effusion as it is forced out below by the pressure of the in-streaming air. This technic prevents the slightest change of pressure in the chest as the pressure is automatically regulated, and there are no manipulations to discommode the patient. The pumping in of the air is done with a double bulb in the hands of an assistant, the interposed tube being several feet long to make it more convenient for the patient. The operator watching over the two puncture needles can inspect and regulate the inflow of air and outflow of fluid. The pleural effusion can thus be forcibly blown out to the last drop without the patient's feeling the slightest discomfort. The puncture is made in the tenth interspace between the scapula and axillary line, the region being first painted with iodin and the patient being seated. The spot where the lower cannula is to be introduced is anesthetized by injection of a 1 per cent. solution of cocain. By this means it proved possible to remove 3,200 c.c. of a tuberculous pleural effusion without the patient's feeling anything more than an agreeable sense of relief. In another case 3,100 and 2,000 c.c. were thus removed at two sittings. The technic described has the advantage that the procedure of evacuating the pleura can be supplemented by pumping air or gas into the cavity to induce therapeutic pneumothorax as indicated.

Münchener medizinische Wochenschrift

December 13, LVII, No. 50, pp. 2617-2672

125 Action of Salvarsan on Experimental Infection of Rabbits. (Wirkung des Dioxydiamidoarsenobenzols auf die experimentelle Vakzineinfektion des Kaninchens.) L. H. Marks.
126 *Lethal Dose of Salvarsan in Acid Solution. (Experimentelle Erfahrungen über die letale dosis der sauren Lösung von Ehrlich-Hata 606.) H. E. Hering.
127 *Salvarsan in Syphilis. (Behandlung der Syphilis mit Arsenobenzol.) F. Weiler.
128 *Thrombosis After Intravenous Injection of Salvarsan. T. Hausmann.
129 *Paget's Disease of the Nipple. (Krebsekzem der Brust.) G. Hirschel.
130 *Serodiagnosis of Typhoid. (Praktische Erfahrungen mit der serodiagnostischen Typhusreaktion nach Mandelbaum.) F. Ast.
131 *Paraffin Injection in Treatment of Chronic Constipation. I. Lipowski.
134 Improved Therapeutic Roentgen-Ray Technic. (Eine neue Methode der Röntgenbestrahlung.) J. Schwenter.
135 Improved Inhalation Therapy. T. Christen.
136 *Stenosis of the Larynx. (Seltene Verengerungen des Kehlkopfes.) H. Graff.
137 Facial Paralysis from Food Poisoning. (Fazialislähmung bei Nahrungsmittelvergiftungen.) F. Erben.
138 Causes Starting Delivery. (Untersuchungen über die Ursachen des Geburtseintrittes.) F. Sauerbruch and M. Heyde.

126. **Lethal Dose of Salvarsan.**—Hering experimented with the acid solution of salvarsan in intravenous injection in five rabbits and five dogs. The results showed that the fatal

dose per kilo for the rabbits was 0.0045 gm. and for the dog from 0.01 to 0.02 gm. This is equivalent to a lethal dose of 0.315 gm. for a man of 70 kilos (about 150 pounds), estimated from the rabbit and of 1.15 gm. estimated by the dog. Fränkel and Grouven have reported the death of a patient injected intravenously with 0.4 gm. of salvarsan in 15 c.c. water with 1 c.c. 1/10 normal sodium hydroxid. Hering thinks that his experiments show that this was above the lethal dose for man, but he is inclined to believe that the acid reaction is mainly responsible for the toxicity of the solution. In an alkaline solution the rabbits were able to bear twenty times the otherwise lethal dose, and the dogs ten times.

127. **Salvarsan in Syphilis.**—Weiler reports experiences at the Leipsic dermatologic clinic in 206 cases of syphilis. Forty of the patients have been under continued observation and recurrence has been noted in fourteen. In three of these cases symptoms on the part of the cranial nerves have been noticed, but as yet it is impossible to say whether they are manifestations of the syphilis or by-effects of the medication. In seventeen cases eruptions developed, accompanied by jaundice in two cases. In two other cases the eruption and temperature resembled typical scarlet fever. In another case hemorrhagic nephritis developed a few weeks after the injection. On the whole, Weiler states that salvarsan undoubtedly works more rapidly than the usual measures in many cases, in some also much more powerfully, but we have as yet no criterion as to whether the drug is able to eradicate the disease. Weiler never used the intravenous route.

128. **Thrombosis After Intravenous Infusion of Salvarsan.**—Hausmann recently stated that he had never observed thrombosis in several hundred intravenous infusions of salvarsan, but now reports a case. It confirms his previous statement that infection is responsible for the thrombosis as in this case, by an accident, the injection was made elsewhere than in the area sterilized for it. The patient was a young man who had had veins punctured for the Wassermann test five times and also for a second infusion of salvarsan, without mishap. The thrombosed vein was resected a month after the infusion, and the *Streptococcus albus* was cultivated from it. In another case Hausmann in trying to obtain blood for cryoscopic investigation in a patient with a stab wound in the kidney, entailing great loss of blood, punctured the vein in various places before he could obtain enough of the very thick blood for the test, and yet there was no tendency to thrombosis. These two cases show the importance of infection in the development of thrombosis.

129. **Paget's Disease of the Nipple.**—Hirschel has encountered two cases during the last year in which an eczematous affection of the nipple and breast proved to be secondary to carcinoma beneath. He previously reported a similar case and here insists on the necessity for discarding the term, Paget's disease of the nipple, and calling this affection by its true name, cancerous eczema of the breast. In both of his cases the eczema had been noticed over a year before its malignant character was recognized. In one case the physician then consulted sent the patient at once to the surgeon. In the other case the patient consulted a physician four weeks after the first sign of the affection was observed. He treated it for simple eczema, and a second and third physician the same during the course of the disease. The patient finally applied to a dermatologist who advised an operation at once. Notwithstanding extensive amputation and Roentgen exposures, multiple recurrences are now manifest, six months later. Hirschel knows of about one hundred cases in the literature, and emphasizes that the trouble is not cancer developing on chronic eczema but eczema secondary to cancer.

130. **Mandelbaum's Reaction in Typhoid.**—THE JOURNAL, March 5, 1910, page 827, gave an illustrated description of the Mandelbaum technic. Ast has been applying the test to 106 persons and found it extremely sensitive, revealing typhoid agglutinins in some cases even when the agglutination test was negative. It seems to be especially useful for detection of bacillus carriers. On the other hand, a slight tendency to a positive reaction was obtained in some of the apparently healthy.

131. **Treatment of Chronic Constipation by Injection of Paraffin.**—Lipowski's attempt to prevent absorption of fluid in the rectum by injection of paraffin was mentioned in THE JOURNAL, Sept. 4, 1909, page 822. He makes the injection in the evening and his further experiences have confirmed, he says, the benefit of this treatment as the most certain means at our disposal for removing the cause of chronic constipation, while it is the simplest and easiest. The injection is made in the knee-elbow or side position, the tube and funnel being warmed and the paraffin warmed until it is fluid. He has found the method useful for children and especially for infants. The paraffin injection is proving further, he declares, an effectual means for aiding in the cure of hemorrhoids, fissures, proctitis and hemorrhagic or inflammatory changes in the rectum. The consistency is that of a salve at the temperature of the body.

136. **Stenosis of the Larynx.**—In Graff's first case the stenosis was the result of lordosis of the cervical vertebræ in a man of 60, the disturbances coming on gradually in the last two years. In the second case a young man awoke one morning with signs of stenosis ascribed to angina and laryngitis and a tuberculous process was assumed at first. The dyspnea became so intense that by the end of six weeks tracheotomy had to be done and the patient had to wear a cannula permanently. An inflammatory process was treated in various ways with no effect and attempts to dilate the stenosis proved ineffectual. In order to exclude an inflammatory process in the vertebræ, the patient was examined with the Roentgen rays when a foreign body was discovered, which proved to be the metal stopper of a mineral-water bottle. When the patient was shown the foreign body, he remembered that he had been drinking mineral water the night before the first sign of trouble and felt that he had swallowed something like a crumb at the time, but had quite forgotten it. The foreign body had penetrated the wall of the trachea and lay close to the spine, without injury of the esophagus. It took over two years to relieve the patient from the necessity of wearing the cannula.

Policlinico, Rome

December, Surgical Section No. 12, pp. 525-568

139 *Early Diagnosis and Radical Treatment of Laryngeal Cancer. T. Della Vedova.
140 Structural Changes in Partially Transplanted Nerves. (Istopathologia degli impianti nervosi centrali parziali.) D. Maragliano.
141 Modification of Krause's Cholecystenterostomy. O. Marchetti.
142 Parathyroid Tumors. S. Gussio. Commenced in No. 11.

139. **Laryngeal Cancer.**—Della Vedova pleads for an earlier diagnosis of cancer of the larynx by the general practitioner and says that this is possible even without specialist skill. The ultimate outcome of the various methods of treating laryngeal cancer seems to be far better in the cases in which laryngotomy was done than in those with a more radical operation. About the first sign of the tendency to cancer is a change in the voice, which too often is referred to a harmless catarrh, but the change in the voice persists unmodified and isolated, even when the general health seems to be continually good. When the voice is hoarse the cancer is generally located in the region of the glottis, involving the vocal cords or their vicinity. A guttural tone suggests a cancer lower down. The change in the voice gradually grows more pronounced or complete aphonia may follow, especially if the cancer is located on the true vocal cords. Other signs that should arouse suspicion are an uncontrollable cough, a little pain radiating to the ear, blood streaks in the sputum and more or less difficulty in breathing after effort. There may be slight spasm of the glottis, especially after coughing. In this early stage there is no tendency to lose weight or grow weak and no infiltration of glands, so that the patient may feel constantly well for months and years until the symptoms of advanced malignant disease become manifest. As laryngotomy is commended as the best operative technic, the practitioner, Della Vedova says, should feel less hesitation in advising immediate operation, this being a comparatively simple measure.

Riforma Medica, Naples

December 12, XXVI, No. 50, pp. 1373-1400

143 Inflammatory Processes Around the Sigmoid. (Meso- e perisigmoidite fibrosa adesiva. Laparotomia liberatrice. Guarigione.) O. Cignozzi.

144 Paradoxic Bulging of Interspaces During Inspiration. (Sui rigonfiamenti inspiratori paradossi degli spazi intercostali.) A. Signorelli.

Hospitalstidende, Copenhagen

November 23, LIII, No. 47, pp. 1297-1328

145 Abnormally Increased Respiration from Lack of Oxygen and Its Importance for the Organism. (Om Iltmangelpolypnoen.) C. Sonne.

November 30, No. 48, pp. 1329-1360

146 Chronic Subphrenic Abscess Presumably of Duodenal Origin. Videbech. Commenced in No. 47.

December 14, No. 50, pp. 1393-1432

147 Intra-Ocular Pressure and Blood-Pressure in the Elderly. (Undersøgelser over det intraokulære Tryk og Blodtryk hos gamle Folk.) H. B. Christensen.

December 21, No. 51, pp. 1433-1480

148 *Duodenal Ulcer and Its Treatment. A. Blad. Commenced in No. 48.

149 *The Cutaneous Tuberculin and the Wassermann Reactions in 228 Scrofulous Children. R. Hertz and O. Thomsen.

December 28, No. 52, pp. 1481-1504

150 *Horseshoe Kidney. Symptomatology, Diagnosis and Treatment. (Hesteskonyren.) T. Rovsing.

148. **Duodenal Ulcer.**—Blad gives the details of sixteen cases in which he operated on account of duodenal ulcer, and reviews 144 articles on duodenal ulcer and its surgical treatment. Medical treatment had been applied in all his cases once or more and had given apparently good results, but sooner or later the symptoms returned. His patients were thus all in a late stage of the disease. For twelve years Tuffier has been urging immediate operation as soon as the ulcer is diagnosed, but Blad does not advocate it until after medical treatment has been given a fair trial.

149. **Cutaneous Tuberculin and Wassermann Reactions in Scrofulous Children.**—The v. Pirquet test gave a positive reaction in 86 per cent. of the 228 children tested and the further course of the cases confirmed the absence of tuberculosis in a number of the cases with a negative response. The Wassermann reaction was positive in eight of the children; in four in this group it was quite slight and these children continued to improve without other measures than those against tuberculosis in general, the v. Pirquet test being positive also in them. The four other children with positive Wassermann reaction presented it in a lively form and mercurial treatment was instituted with the result that the children who had not been thriving before were cured of all disturbances in a short time. Hertz and Thomsen conclude from these experiences that both reactions are of great importance for the differential diagnosis of "scrofulous" affections.

150. **Horseshoe Kidney.**—Rovsing has operated in four cases of horseshoe kidney, but it was not diagnosed beforehand in two of the cases. The complaints of the patients were alike in all, referring to a sense of oppression and dragging down in the region below the stomach, and pains extending to the lumbar region or radiating upward. The discomfort and pain disappear when the patients recline or are at rest, but recur constantly during physical exercise and are especially pronounced if the patient bends over backward. This latter symptom was particularly noticeable in one of the patients, a young man who had to handle heavy lumber at his work. Whenever the spine is bent backward the horseshoe kidney is forced against the spine and not only is this painful but there is liable to be a nervous shock as was observed in one of his cases. The palpation findings confirm the diagnosis, sustained by the subsidence of all discomfort when the patients recline. Rest and refraining from physical overexertion are the main points in treatment, but when this is impossible he suggests operative separation of the kidney into the normal two organs. He performed this operation in his third case with complete success, the young man being relieved from all former disturbances and now having two apparently normally functioning kidneys. Rovsing thinks that he is the first to perform this operation and the gratifying results in his case commend it for wider adoption when the patients are unable to spare themselves physical exertion. He operated by the transperitoneal route and commends this technic as the best; he entered the abdomen outside the colon and duodenum, fearing that the pressure of the kidney might have made the mesentery abnormally thick and tough in the center. He severed the isthmus by the same technic as for resection of the liver.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with Additions, by Nathaniel Bowditch Potter, M.D., Assistant Professor of Clinical Medicine at Columbia University (College of Physicians and Surgeons), New York. Second Edition. Authorized Translation from the Fifth Revised and Enlarged German Edition. Cloth. Price, $6.50 net. Pp. 1229, with 471 illustrations. Philadelphia: W. B. Saunders Co., 1911.

BISMUTH PASTE IN CHRONIC SUPPURATIONS. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M.D., Surgeon to the North Chicago Hospital, Chicago. With an Introduction by Carl Beck, M.D. And a Chapter on the Application of Bismuth Paste in the Treatment of Chronic Suppuration of the Nasal Accessory Sinuses and the Ear, by Joseph C. Beck, M.D. Cloth. Price, $2.50. Pp. 237, with 90 illustrations. St. Louis: C. V. Mosby Co., 1910.

OM THYMUSINVOLUTIONEN EFTER RÖNTGENBESTRÅLNING JÄMTE NÅGRE IAKTTAGELSER ÖFVER LEUKOLYSEN I ÖFRIGT HOS RÖNTGENBESTRÅLADE DJUR. Akademisk Afhandling. Medicinska Fakulteten I Uppsala For Vinnande Af Medicine Doktorsgrad. Af Hans Rudberg, Med. Kand. af Smålands Nation. Paper. Pp. 106, with illustrations. Uppsala: Almqvist & Wiksells Boktryckeri-A.-B., 1909.

PRIMER OF HYGIENE. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia, and Joseph S. Caldwell, Professor of Biology, George Peabody College for Teachers, Tennessee. Illustrated by Karl Hassmann and Hermann Heyer. Cloth. Price, 40 cents net. Pp. 184, with 113 illustrations. Yonkers-on-Hudson, N. Y.: World Book Co., 1910.

PRINCIPLES OF PUBLIC HEALTH. A Simple Text-Book on Hygiene Presenting the Principles Fundamental to the Conservation of Individual and Community Health. By Thomas D. Tuttle, M.D., Secretary and Executive Officer of the State Board of Health of Montana. Cloth. Price, 50 cents net. Yonkers-on-Hudson, N. Y.: World Book Co., 1910.

THE END OF DARWINISM. Not Change but Persistence is Characteristic of Life; Every Change is Essentially a Persistence; Only What Persists Can Change. An Essay by Alfred P. Schultz, M.D., Author of "Race or Mongrel." Paper. Price, 50 cents. Pp. 19. Monticello (Sullivan County), N. Y.: A. P. Schultz, 1911.

BIDRAG TILL DE CEREBRALA FÖRLAMNINGARNAS SYMPTOMATOLOGI. Akademisk Afhandling. Medicinska Fakulteten I Uppsala För Vinnande Af Medicine Doktorsgrad. Af Gustaf Bergmark, Medicine Licentiat af Göteborgs Nation. Paper. Pp. 205, with illustrations. Uppsala: Almqvist & Wiksells Boktryckeri-A.-B., 1908.

DISEASES OF THE ANUS, RECTUM AND SIGMOID. For the Use of Students and General Practitioners. By Samuel T. Earle, M.D., Professor Emeritus of Diseases of the Rectum in the Baltimore Medical College. Cloth. Price, $5 net. Pp. 476, with 152 illustrations. Philadelphia: J. B. Lippincott Co., 1911.

THE HISTORY OF MEDICINE. Philosophical and Critical, from Its Origin to the Twentieth Century. By David Allyn Gorton, M.D. In Two Volumes. Volumes I and II. Cloth. Price, $6. Pp. 436 and 497, with 37 illustrations. New York: G. P. Putnam's Sons, 1910.

EDUCATION: HOW OLD THE NEW. By James J. Walsh, M.D., Dean and Professor of the History of Medicine and of Nervous Diseases at Fordham University School of Medicine. Cloth. Price, $2 net. Pp. 459. New York: Fordham University Press, 1910.

PROCEEDINGS OF THE NORTH DAKOTA PHARMACEUTICAL ASSOCIATION. Twenty-Fifth Annual Meeting, held at Fargo, Aug. 9, 10, 11, 1910. Roll of Members, etc. Paper. Pp. 160. W. S. Parker, Secretary, Lisbon, N. Dak.

VAGINAL CELIOTOMY. By S. Wyllis Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists. Cloth. Price, $5 net. Pp. 443, with 148 illustrations. Philadelphia: W. B. Saunders Co., 1911.

THE INFLUENCE OF STORAGE AND VARIOUS PRESERVATIVES ON THE DISSOLVED OXYGEN IN WATERS. By Dr. Arthur Lederer. Paper. Pp. 14. Sewage Disposal Investigations, the Sanitary District of Chicago, 1910.

THE PRESERVATION OF SEWAGE BY THE AID OF CHLOROFORM AND COLD STORAGE. Dr. Arthur Lederer and Harry B. Hommon. Paper. Pp. 16. Sewage Disposal Investigations, the Sanitary District of Chicago, 1910.

THE DAWN OF THE HEALTH AGE. By Benjamin Moore, D.Sc., M.R.C.S., L.R.C.P. Cloth. Price, $1.40 net. Pp. 204. London: J. & A. Churchill (Philadelphia: P. Blakiston's Son & Co.), 1911.

PRACTICAL PHYSIOLOGY. Edited by M. S. Pembrey. By Various Contributors. Third Edition. Coth. Price, $4 net. Pp. 480, with 255 illustrations. New York: Longmans, Green & Co., 1910.

THE CARE AND TRAINING OF CHILDREN. By Le Grand Kerr, M.D., Author of "Diseases of Children," etc. Cloth. Price, 75 cents net. Pp. 233. New York: Funk & Wagnalls Co., 1910.

REPORT OF THE MERCY HOSPITAL, PITTSBURG, PA. From May 31, 1908, to May 31, 1910. Paper. Pp. 154, with illustrations.